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FACT SHEET

KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT TO DISCHARGE TREATED WASTEWATER INTO WATERS OF THE COMMONWEALTH

KPDES No.: KYG040000 **Permit Writer:** Larry Sowder **Date:** May 15, 2009
AI No.: 35050

1. SYNOPSIS OF APPLICATION

a. Name and Address of Applicant

Those coal mining operations, which have obtained or are in the processing of obtaining a Surface Mining Control and Reclamation Act (SMCRA) Permanent Program Permit from the Department for Natural Resources (DNR), pursuant to Chapter 350 of the Kentucky Revised Statutes (KRS) and Title 405 of the Kentucky Administrative Regulations (KARs). Here after referenced as a Permanent Program Permit.

b. Facility Location

Those coal mining operations located within the 120 counties of the Commonwealth of Kentucky.

c. Description of Applicant's Operation

Covered activities include all forms of coal mining and processing with the following exceptions:

1) Those coal mining operations which have not been permitted under KRS Chapter 350 and KAR Title 405.

2) New or expanded operations proposing to discharge directly into a water body that has been classified as a Cold Water Aquatic Habitat (CAH) or as an Outstanding State Resource Water (OSRW) as listed in 401 KAR 10:026, Section 5.

3) New or expanded operations proposing to discharge directly into or to a direct first or second order tributary of a publicly-owned lake or reservoir as listed in 401 KAR 10:026, Section 5.

4) New or expanded operations proposing to discharge directly into a water body that has been categorized as an Outstanding National Resource Water (ONRW) or as an Exceptional Water (EW) as listed in 401 KAR 10:030.

c. Description of Applicant's Operation - continued

5) New or expanded operations involving the dredging of coal from waters of the Commonwealth.

6) New or expanded operations involving the wet beneficiation (washing) of coal.

7) New or expanded operations involving the disposal of coal slurry into waters of the Commonwealth or underground injection.

8) Any operation using or proposing to use Anhydrous Ammonia as a treatment option.

9) New or expanded operations within five (5) miles upstream of an existing drinking water intake.

10) Any operation discharging directly to a water of the Commonwealth that has been listed, in the most recently developed 305 (b) report or 303(d) list, as impaired for one or more of the pollutants commonly associated with coal mining. Pollutants commonly associated with coal mining include sedimentation, total suspended solids, total dissolved solids, conductivity, iron, manganese, and metals.

11) Any operation that meets the definition of a coal remining operation found in Coal Mining Effluent Guidelines (Subpart G of 40 CFR Part 434).

12) Any operation proposing to dispose of solid or special wastes within the mining area.

13) Any operation that is classified as an “Alkaline Mine” pursuant to 40 CFR 434.11.

14) Any operation, which the Division of Water (KYDOW) determines that an individual permit would better address the discharges from that operation.

d. Description of Existing Pollution Abatement Facilities

In accordance with the requirements of the KRS Chapter 350 and KAR Title 405 affected drainage from a coal mine shall be directed to a sediment control structure. Therefore at a minimum coal mine drainage is treated by sedimentation. In some instances it may be necessary for chemical additions to adjust pH or to facilitate the removal of sediment or metals.

e. Permitting Action

Reissuance of a general permit for coal mining and associated activities conducted in the Commonwealth of Kentucky.

2. RECEIVING WATERS

a. Receiving Water Name

Those water bodies of the Commonwealth that comprise the Mississippi and Ohio River basins and sub-basins within the political and geographic boundaries of Kentucky.

b. Stream Segment Use Classifications

Warm Water Aquatic Habitat, Primary and Secondary Contact Recreation, and Domestic Water Supply

c. Stream Segment Antidegradation Categorization

Includes water bodies which have been categorized, pursuant to 401 KAR 10:030, Section 3, as “High Quality Waters”

Includes water bodies which have been categorized as “Impaired Waters”, pursuant to 401 KAR 10:030, Section 4, and which have been listed in the most recently developed 305 (b) report or 303(d) list, as impaired for pollutants not commonly associated with coal mining.

d. Stream Low Flow Condition

The 7-day, 10-year low flow conditions of the receiving streams can range from zero (0) cubic feet per second (cfs) to 111,000 cfs for the Mississippi River.

3. REPORTED DISCHARGE AND PROPOSED LIMITS

Description of Discharge – Discharges of "acid or ferruginous mine drainage" from "existing source" or "new discharger" coal preparation plants and coal preparation plant associated areas

Effluent Characteristics	Reported Discharge Monthly Average	Reported Discharge Daily Maximum	Proposed Limits Monthly Average	Proposed Limits Daily Maximum	Applicable Water Quality Criteria and/or Effluent Guidelines
Flow (MGD)	Variable	Variable	Report	Report	401 KAR 5:065, Section 2(8)
Conductivity (µS/cm)	Variable	Variable	Report	Report	401 KAR 5:065, Section 2(8)
Acidity[1] (as mg/l $CaCO_3$)	Variable	Variable	Report	Report	401 KAR 5:080, Section 1(2)(c)2
Alkalinity[1] (as mg/l $CaCO_3$)	Variable	Variable	Report	Report	401 KAR 5:080, Section 1(2)(c)2
Oil & Grease[2]	Variable	Variable	10.0 mg/l	15.0 mg/l	401 KAR 5:080, Section 1(2)(c)2
Total Recoverable Iron	Variable	Variable	3.5 mg/l	4.0 mg/l	401 KAR 10:031, Section 6 401 KAR 5:065, Sections 2, 4 and 5
Total Recoverable Manganese	Variable	Variable	2.0 mg/l	4.0 mg/l	401 KAR 5:065, Sections 4 and 5
Total Suspended Solids	Variable	Variable	35.0 mg/l	70.0 mg/l	401 KAR 5:065, Sections 4 and 5
pH[3] Standard units)	Variable	Variable	6.0 (min.)	9.0 (max.)	401 KAR 10:031, Section 4(1)(b) 401 KAR 5:065, Sections 4 and 5

[1]At all times acidity shall be less than alkalinity.

[2]The limits and monitoring for Oil & Grease do not apply if the permittee has developed and implemented a "Best Management Practices" (BMP) plan as required by this permit. The BMP plan shall include a specific section that addresses the handling, storage and disposal of petroleum products and the maintenance procedures for mining equipment.

[3]These types of discharges shall not cause the pH of the receiving stream to fluctuate more that 1.0 standard unit over a period of 24 hours.

4. METHODOLOGY USED IN DETERMINING LIMITATIONS

a. Description of Discharge

Discharges of “acid or ferruginous mine drainage” from “existing source” or “new discharger” coal preparation plants and coal preparation plant associated areas

b. Effluent Characteristics

Flow	Total Recoverable Iron	Total Recoverable Manganese
Acidity	Alkalinity	Total Suspended Solids
Oil & Grease	Conductivity	pH

c. Pertinent Factors

The term **"acid or ferruginous mine drainage"** means mine drainage which, before any treatment, has a pH of less than 6.0 or has a total recoverable iron concentration equal to or greater than 10.0 mg/l.

The terms **“existing source coal preparation plant and coal preparation plant associated areas”** mean a coal preparation plant or coal preparation plant associated area that: 1) the discharge of pollutants began prior to January 1981 and 2) received a finally effective KPDES or NPEDS permit for the discharges at that site.

The term **“new discharger coal preparation plant and coal preparation plant associated areas”** means a coal preparation plant or coal preparation plant associated area: 1) from which there is or may be a new or additional discharge of pollutants at a site at which on August 13, 1979, it had never discharged pollutants; and 2) which has never received a finally effective KPDES or NPDES permit for discharge at that site; and 3) which is not a new source.

Wet beneficiation or coal washers and their associated areas are not eligible for coverage under this general permit.

d. Monitoring Requirements

Instantaneous flow measurements shall be collected twice per month.

pH, Total Recoverable Iron, Total Recoverable Manganese and Total Suspended Solids shall be monitored twice per month by grab sample.

Acidity, Alkalinity, Conductivity, Oil & Grease shall be monitored once per month by grab sample.

4. METHODOLOGY USED IN DETERMINING LIMITATIONS

e. Justification of Limits

The Kentucky Administrative Regulations (KARs) cited below have been duly promulgated pursuant to the requirements of Chapter 224 of the Kentucky Revised Statutes (KRSs).

Flow and Conductivity
The monitoring requirements for these parameters are consistent with the requirements of 401 KAR 5:065, Section 2(8).

Acidity, Alkalinity, and Oil & Grease
The limits and requirements for these parameters are consistent with the requirements of 401 KAR 5:080, Section 1(2)(c)2. These limits are representative of the Division of Water's "Best Professional Judgment" (BPJ) determination of the "Best Practicable Control Technology Currently Available" (BPT) and "Best Available Technology Economically Achievable" (BAT) requirements for these types of discharges.

Total Recoverable Manganese and Total Suspended Solids
The limits for these parameters are consistent with the requirements of 401 KAR 5:065, Sections 4 and 5. These limits are representative of the "Best Practicable Control Technology Currently Available" (BPT) and "Best Available Technology Economically Achievable" (BAT) requirements for these types of discharges pursuant to 40 CFR Parts 434.22(a), and 434.23(a).

Total Recoverable Iron
The limits for this parameter are consistent with the requirements of 401 KAR 10:031, Section 6 and 401 KAR 5:065, Sections 2, 4 & 5. These limits are representative of the "Best Practicable Control Technology Currently Available" (BPT) and "Best Available Technology Economically Achievable" (BAT) requirements for these types of discharges pursuant to 40 CFR Parts 434.22(a) and 434.23(a). Based on EPA memorandums from August 13, 1998 and May 21, 1996 the terms Total Iron and Total Recoverable Iron are synonymous therefore as Kentucky's Water Quality Criteria are expressed terms of total recoverable the term Total Recoverable Iron shall be used. Pursuant to 401 KAR 5:065, Section 2(4) water quality standards are to be included in the KPDES permit when it is necessary to achieve water quality standards. Title 401 KAR 10:031, Section 6 Table 1 establishes an acute criterion of 4.0 mg/l and a chronic criterion of 1.0 mg/l for this parameter. Footnote 8 of that table states that the chronic criterion for iron shall not exceed 3.5 mg/l if aquatic life has not been shown to be adversely impacted. The Division of Water is therefore implementing only the acute criterion as a daily maximum in this permit. The implementation of the chronic criterion of 1.0 mg/l would indicate that the aquatic life of that segment of the receiving stream had been adversely impacted and therefore would render any discharge to that segment ineligible for general permit coverage and necessitate an individual permit.

pH
The limits for this parameter are consistent with the requirements of 401 KAR 10:031, Section 4(1)(b) and 5:065, Sections 4 and 5. These limits are representative of the "Best Practicable Control Technology Currently Available" (BPT) and "Best Available Technology Economically Achievable" (BAT) requirements for these types of discharges pursuant to 40 CFR Parts 434.22(a) and 434.23(a).

5. REPORTED DISCHARGE AND PROPOSED LIMITS

Description of Discharge - Discharges of “acid or ferruginous mine drainage” from “new source” coal preparation plants and coal preparation plant associated areas

Effluent Characteristics	Reported Discharge Monthly Average	Reported Discharge Daily Maximum	Proposed Limits Monthly Average	Proposed Limits Daily Maximum	Applicable Water Quality Criteria and/or Effluent Guidelines
Flow (MGD)	Variable	Variable	Report	Report	401 KAR 5:065, Section 2(8)
Conductivity (µS/cm)	Variable	Variable	Report	Report	401 KAR 5:065, Section 2(8)
Acidity[1] (as mg/l $CaCO_3$)	Variable	Variable	Report	Report	401 KAR 5:080, Section 1(2)(c)2
Alkalinity[1] (as mg/l $CaCO_3$)	Variable	Variable	Report	Report	401 KAR 5:080, Section 1(2)(c)2
Oil & Grease[2]	Variable	Variable	10.0 mg/l	15.0 mg/l	401 KAR 5:080, Section 1(2)(c)2
Total Recoverable Iron	Variable	Variable	3.0 mg/l	4.0 mg/l	401 KAR 10:031, Section 6 401 KAR 5:065, Sections 2, 4 and 5
Total Recoverable Manganese	Variable	Variable	2.0 mg/l	4.0 mg/l	401 KAR 5:065, Sections 4 and 5
Total Suspended Solids	Variable	Variable	35.0 mg/l	70.0 mg/l	401 KAR 5:065, Sections 4 and 5
pH[3] Standard units)	Variable	Variable	6.0 (min.)	9.0 (max.)	401 KAR 10:031, Section 4(1)(b) 401 KAR 5:065, Sections 4 and 5

[1]At all times acidity shall be less than alkalinity.

[2]The limits and monitoring for Oil & Grease do not apply if the permittee has developed and implemented a “Best Management Practices” (BMP) plan as required by this permit. The BMP plan shall include a specific section that addresses the handling, storage and disposal of petroleum products and the maintenance procedures for mining equipment.

[3]These types of discharges shall not cause the pH of the receiving stream to fluctuate more that 1.0 standard unit over a period of 24 hours.

6. METHODOLOGY USED IN DETERMINING LIMITATIONS

a. Description of Discharge

Discharges of “acid or ferruginous mine drainage” from “new source” coal preparation plants and coal preparation plant associated areas

b. Effluent Characteristics

Flow	Total Recoverable Iron	Total Recoverable Manganese
Acidity	Alkalinity	Total Suspended Solids
Oil & Grease	Conductivity	pH

c. Pertinent Factors

The term **"acid or ferruginous mine drainage"** means mine drainage which, before any treatment, has a pH of less than 6.0 or has a total recoverable iron concentration equal to or greater than 10.0 mg/l.

The terms **"coal preparation plant and coal preparation plant associated areas”** means a coal preparation plant or coal preparation plant associated area on which construction is commenced after January 1981 or which is determined by the Director of the KYDOW to constitute a "major alteration."

The term **“major alteration”** as it relates to a coal preparation plant and coal preparation plant associated area means KYDOW has determined that a new, altered, or increased discharge of pollutants has occurred after January 1981.

Wet beneficiation or coal washers and their associated areas are not eligible for coverage under this general permit.

d. Monitoring Requirements

Instantaneous flow measurements shall be collected twice per month.

pH, Total Recoverable Iron, Total Recoverable Manganese and Total Suspended Solids shall be monitored twice per month by grab sample.

Acidity, Alkalinity, Conductivity, Oil & Grease shall be monitored once per month by grab sample.

6. METHODOLOGY USED IN DETERMINING LIMITATIONS

e. Justification of Limits

The Kentucky Administrative Regulations (KARs) cited below have been duly promulgated pursuant to the requirements of Chapter 224 of the Kentucky Revised Statutes (KRSs).

Flow and Conductivity
The monitoring requirements for these parameters are consistent with the requirements of 401 KAR 5:065, Section 2(8).

Acidity, Alkalinity, and Oil & Grease
The limits and requirements for these parameters are consistent with the requirements of 401 KAR 5:080, Section 1(2)(c)2. These limits are representative of the Division of Water's "Best Professional Judgment" (BPJ) determination of the "Best Practicable Control Technology Currently Available" (BPT) and "Best Available Technology Economically Achievable" (BAT) requirements for these types of discharges.

Total Recoverable Manganese and Total Suspended Solids
The limits for these parameters are consistent with the requirements of 401 KAR 5:065, Sections 4 and 5. These limits are representative of the “New Source Performance” (NSPS) requirements for these types of discharges pursuant to 40 CFR Parts 434.25(a).

Total Recoverable Iron
The limits for this parameter are consistent with the requirements of 401 KAR 10:031, Section 6 and 401 KAR 5:065, Sections 2, 4 & 5. These limits are representative of the “New Source Performance” (NSPS) requirements for these types of discharges pursuant to 40 CFR Parts 434.25(a). Based on EPA memorandums from August 13, 1998 and May 21, 1996 the terms Total Iron and Total Recoverable Iron are synonymous therefore as Kentucky’s Water Quality Criteria are expressed terms of total recoverable the term Total Recoverable Iron shall be used. Pursuant to 401 KAR 5:065, Section 2(4) water quality standards are to be included in the KPDES permit when it is necessary to achieve water quality standards. Title 401 KAR 10:031, Section 6 Table 1 establishes an acute criterion of 4.0 mg/l and a chronic criterion of 1.0 mg/l for this parameter. Footnote 8 of that table states that the chronic criterion for iron shall not exceed 3.5 mg/l if aquatic life has not been shown to be adversely impacted. The Division of Water is therefore implementing only the acute criterion as a daily maximum in this permit. The implementation of the chronic criterion of 1.0 mg/l would indicate that the aquatic life of that segment of the receiving stream had been adversely impacted and therefore would render any discharge to that segment ineligible for general permit coverage and necessitate an individual permit.

pH
The limits for this parameter are consistent with the requirements of 401 KAR 10:031, Section 4(1)(b) and 5:065, Sections 4 and 5. These limits are representative of the “New Source Performance” (NSPS) requirements for these types of discharges pursuant to 40 CFR Parts 434.25(a).

7. REPORTED DISCHARGE AND PROPOSED LIMITS

Description of Discharge - Discharges of “acid or ferruginous mine drainage” from “existing source” or “new discharger” active mining areas excluding coal preparation plants and coal preparation plat associated areas

Effluent Characteristics	Reported Discharge Monthly Average	Reported Discharge Daily Maximum	Proposed Limits Monthly Average	Proposed Limits Daily Maximum	Applicable Water Quality Criteria and/or Effluent Guidelines
Flow (MGD)	Variable	Variable	Report	Report	401 KAR 5:065, Section 2(8)
Conductivity (µS/cm)	Variable	Variable	Report	Report	401 KAR 5:065, Section 2(8)
Acidity[1] (as mg/l $CaCO_3$)	Variable	Variable	Report	Report	401 KAR 5:080, Section 1(2)(c)2
Alkalinity[1] (as mg/l $CaCO_3$)	Variable	Variable	Report	Report	401 KAR 5:080, Section 1(2)(c)2
Oil & Grease[2]	Variable	Variable	10.0 mg/l	15.0 mg/l	401 KAR 5:080, Section 1(2)(c)2
Total Recoverable Iron	Variable	Variable	3.5 mg/l	4.0 mg/l	401 KAR 10:031, Section 6 401 KAR 5:065, Sections 2, 4 and 5
Total Recoverable Manganese	Variable	Variable	2.0 mg/l	4.0 mg/l	401 KAR 5:065, Sections 4 and 5
Total Suspended Solids	Variable	Variable	35.0 mg/l	70.0 mg/l	401 KAR 5:065, Sections 4 and 5
pH[3] Standard units)	Variable	Variable	6.0 (min.)	9.0 (max.)	401 KAR 10:031, Section 4(1)(b) 401 KAR 5:065, Sections 4 and 5

[1]At all times acidity shall be less than alkalinity.

[2]The limits and monitoring for Oil & Grease do not apply if the permittee has developed and implemented a “Best Management Practices” (BMP) plan as required by this permit. The BMP plan shall include a specific section that addresses the handling, storage and disposal of petroleum products and the maintenance procedures for mining equipment.

[3]These types of discharges shall not cause the pH of the receiving stream to fluctuate more that 1.0 standard unit over a period of 24 hours.

8. METHODOLOGY USED IN DETERMINING LIMITATIONS

a. Description of Discharge

Discharges of “acid or ferruginous mine drainage” from “existing source” or “new discharger” active mining areas excluding coal preparation plants and coal preparation plat associated areas

b. Effluent Characteristics

Flow	Total Recoverable Iron	Total Recoverable Manganese
Acidity	Alkalinity	Total Suspended Solids
Oil & Grease	Conductivity	pH

c. Pertinent Factors

The term **"acid or ferruginous mine drainage"** means mine drainage which, before any treatment, has a pH of less than 6.0 or has a total recoverable iron concentration equal to or greater than 10.0 mg/l.

The terms **“existing source coal mine”** mean a coal mine that: 1) the discharge of pollutants began prior to May 4, 1984 and 2) received a finally effective KPDES or NPEDS permit for the discharges at that site.

The term **“new discharger coal mine”** means a coal mine: 1) from which there is or may be a new or additional discharge of pollutants at a site at which on May 4, 1984, it had never discharged pollutants; and 2) which has never received a finally effective KPDES or NPDES permit for discharge at that site; and 3) which is not a new source.

d. Monitoring Requirements

Instantaneous flow measurements shall be collected twice per month.

pH, Total Recoverable Iron, Total Recoverable Manganese and Total Suspended Solids shall be monitored twice per month by grab sample.

Acidity, Alkalinity, Conductivity, Oil & Grease shall be monitored once per month by grab sample.

8. METHODOLOGY USED IN DETERMINING LIMITATIONS

e. Justification of Limits

The Kentucky Administrative Regulations (KARs) cited below have been duly promulgated pursuant to the requirements of Chapter 224 of the Kentucky Revised Statutes (KRSs).

Flow and Conductivity
The monitoring requirements for these parameters are consistent with the requirements of 401 KAR 5:065, Section 2(8).

Acidity, Alkalinity, and Oil & Grease
The limits and requirements for these parameters are consistent with the requirements of 401 KAR 5:080, Section 1(2)(c)2. These limits are representative of the Division of Water's "Best Professional Judgment" (BPJ) determination of the "Best Practicable Control Technology Currently Available" (BPT) and "Best Available Technology Economically Achievable" (BAT) requirements for these types of discharges.

Total Recoverable Manganese and Total Suspended Solids
The limits for these parameters are consistent with the requirements of 401 KAR 5:065, Sections 4 and 5. These limits are representative of the "Best Practicable Control Technology Currently Available" (BPT) and "Best Available Technology Economically Achievable" (BAT) requirements for these types of discharges pursuant to 40 CFR Parts 434.32 and 434.33.

Total Recoverable Iron
The limits for this parameter are consistent with the requirements of 401 KAR 10:031, Section 6 and 401 KAR 5:065, Sections 2, 4 & 5. These limits are representative of the "Best Practicable Control Technology Currently Available" (BPT) and "Best Available Technology Economically Achievable" (BAT) requirements for these types of discharges pursuant to 40 CFR Parts 434.32 and 434.33. Based on EPA memorandums from August 13, 1998 and May 21, 1996 the terms Total Iron and Total Recoverable Iron are synonymous therefore as Kentucky's Water Quality Criteria are expressed terms of total recoverable the term Total Recoverable Iron shall be used. Pursuant to 401 KAR 5:065, Section 2(4) water quality standards are to be included in the KPDES permit when it is necessary to achieve water quality standards. Title 401 KAR 10:031, Section 6 Table 1 establishes an acute criterion of 4.0 mg/l and a chronic criterion of 1.0 mg/l for this parameter. Footnote 8 of that table states that the chronic criterion for iron shall not exceed 3.5 mg/l if aquatic life has not been shown to be adversely impacted. The Division of Water is therefore implementing only the acute criterion as a daily maximum in this permit. The implementation of the chronic criterion of 1.0 mg/l would indicate that the aquatic life of that segment of the receiving stream had been adversely impacted and therefore would render any discharge to that segment ineligible for general permit coverage and necessitate an individual permit.

pH
The limits for this parameter are consistent with the requirements of 401 KAR 10:031, Section 4(1)(b) and 5:065, Sections 4 and 5. These limits are representative of the "Best Practicable Control Technology Currently Available" (BPT) and "Best Available Technology Economically Achievable" (BAT) requirements for these types of discharges pursuant to 40 CFR Parts 434.32 and 434.33.

9. REPORTED DISCHARGE AND PROPOSED LIMITS

Description of Discharge – Discharges of “acid or ferruginous mine drainage” from “new source” active mining areas excluding coal preparation plants and coal preparation plat associated areas

Effluent Characteristics	Reported Discharge Monthly Average	Reported Discharge Daily Maximum	Proposed Limits Monthly Average	Proposed Limits Daily Maximum	Applicable Water Quality Criteria and/or Effluent Guidelines
Flow (MGD)	Variable	Variable	Report	Report	401 KAR 5:065, Section 2(8)
Conductivity (µS/cm)	Variable	Variable	Report	Report	401 KAR 5:065, Section 2(8)
Acidity[1] (as mg/l $CaCO_3$)	Variable	Variable	Report	Report	401 KAR 5:080, Section 1(2)(c)2
Alkalinity[1] (as mg/l $CaCO_3$)	Variable	Variable	Report	Report	401 KAR 5:080, Section 1(2)(c)2
Oil & Grease[2]	Variable	Variable	10.0 mg/l	15.0 mg/l	401 KAR 5:080, Section 1(2)(c)2
Total Recoverable Iron	Variable	Variable	3.0 mg/l	4.0 mg/l	401 KAR 10:031, Section 6 401 KAR 5:065, Sections 2, 4 and 5
Total Recoverable Manganese	Variable	Variable	2.0 mg/l	4.0 mg/l	401 KAR 5:065, Sections 4 and 5
Total Suspended Solids	Variable	Variable	35.0 mg/l	70.0 mg/l	401 KAR 5:065, Sections 4 and 5
pH[3] Standard units)	Variable	Variable	6.0 (min.)	9.0 (max.)	401 KAR 10:031, Section 4(1)(b) 401 KAR 5:065, Sections 4 and 5

[1]At all times acidity shall be less than alkalinity.

[2]The limits and monitoring for Oil & Grease do not apply if the permittee has developed and implemented a “Best Management Practices” (BMP) plan as required by this permit. The BMP plan shall include a specific section that addresses the handling, storage and disposal of petroleum products and the maintenance procedures for mining equipment.

[3]These types of discharges shall not cause the pH of the receiving stream to fluctuate more that 1.0 standard unit over a period of 24 hours.

10. METHODOLOGY USED IN DETERMINING LIMITATIONS

a. Description of Discharge

Discharges of “acid or ferruginous mine drainage” from “new source” active mining areas, excluding coal preparation plants and coal preparation plant associated areas

b. Effluent Characteristics

Flow	Total Recoverable Iron	Total Recoverable Manganese
Acidity	Alkalinity	Total Suspended Solids
Oil & Grease	Conductivity	pH

c. Pertinent Factors

The term **"acid or ferruginous mine drainage"** means mine drainage which, before any treatment, has a pH of less than 6.0 or has a total recoverable iron concentration equal to or greater than 10.0 mg/l.

The terms **"coal mine”** means a coal mine on which construction is commenced after May 4, 1984 or which is determined by the Director of the KYDOW to constitute a "major alteration."

The term **“major alteration”** means a coal mine for which the KYDOW determines that a new, altered, or increased discharge of pollutants has occurred after May 4, 1984, in connection with the mine for which the KPDES permit is being considered. In making this determination, the KYDOW shall take into account one (1) or more of the following events: 1) Extraction of a coal seam not previously extracted by that mine; 2) Discharge into a drainage area not previously affected by wastewater discharges from the mine; 3) Extensive new surface disturbance at the mining operation; 4) Construction of a new shaft, slope, or drift; and 5) Such other factors as the Director of the KYDOW deems relevant.

d. Monitoring Requirements

Instantaneous flow measurements shall be collected twice per month.

pH, Total Recoverable Iron, Total Recoverable Manganese and Total Suspended Solids shall be monitored twice per month by grab sample.

Acidity, Alkalinity, Conductivity, Oil & Grease shall be monitored once per month by grab sample.

10. METHODOLOGY USED IN DETERMINING LIMITATIONS

e. Justification of Limits

The Kentucky Administrative Regulations (KARs) cited below have been duly promulgated pursuant to the requirements of Chapter 224 of the Kentucky Revised Statutes (KRSs).

Flow and Conductivity
The monitoring requirements for these parameters are consistent with the requirements of 401 KAR 5:065, Section 2(8).

Acidity, Alkalinity, and Oil & Grease
The limits and requirements for these parameters are consistent with the requirements of 401 KAR 5:080, Section 1(2)(c)2. These limits are representative of the Division of Water's "Best Professional Judgment" (BPJ) determination of the "Best Practicable Control Technology Currently Available" (BPT) and "Best Available Technology Economically Achievable" (BAT) requirements for these types of discharges.

Total Recoverable Manganese and Total Suspended Solids
The limits for these parameters are consistent with the requirements of 401 KAR 5:065, Sections 4 and 5. These limits are representative of the “New Source Performance” (NSPS) requirements for these types of discharges pursuant to 40 CFR Parts 434.35.

Total Recoverable Iron
The limits for this parameter are consistent with the requirements of 401 KAR 10:031, Section 6 and 401 KAR 5:065, Sections 2, 4 & 5. These limits are representative of the “New Source Performance” (NSPS) requirements for these types of discharges pursuant to 40 CFR Parts 434.35. Based on EPA memorandums from August 13, 1998 and May 21, 1996 the terms Total Iron and Total Recoverable Iron are synonymous therefore as Kentucky’s Water Quality Criteria are expressed terms of total recoverable the term Total Recoverable Iron shall be used. Pursuant to 401 KAR 5:065, Section 2(4) water quality standards are to be included in the KPDES permit when it is necessary to achieve water quality standards. Title 401 KAR 10:031, Section 6 Table 1 establishes an acute criterion of 4.0 mg/l and a chronic criterion of 1.0 mg/l for this parameter. Footnote 8 of that table states that the chronic criterion for iron shall not exceed 3.5 mg/l if aquatic life has not been shown to be adversely impacted. The Division of Water is therefore implementing only the acute criterion as a daily maximum in this permit. The implementation of the chronic criterion of 1.0 mg/l would indicate that the aquatic life of that segment of the receiving stream had been adversely impacted and therefore would render any discharge to that segment ineligible for general permit coverage and necessitate an individual permit.

pH
The limits for this parameter are consistent with the requirements of 401 KAR 10:031, Section 4(1)(b) and 5:065, Sections 4 and 5. These limits are representative of the “New Source Performance” (NSPS) requirements for these types of discharges pursuant to 40 CFR Parts 434.35.

11. REPORTED DISCHARGE AND PROPOSED LIMITS

Description of Discharge – Discharges of "acid or ferruginous mine drainage" from "existing source" or "new discharger" post mining areas (reclamation areas) excluding underground mine drainage

Effluent Characteristics	Reported Discharge Monthly Average	Reported Discharge Daily Maximum	Proposed Limits Monthly Average	Proposed Limits Daily Maximum	Applicable Water Quality Criteria and/or Effluent Guidelines
Flow (MGD)	Variable	Variable	Report	Report	401 KAR 5:065, Section 2(8)
Conductivity (µS/cm)	Variable	Variable	Report	Report	401 KAR 5:065, Section 2(8)
Acidity[1] (as mg/l CaCO3)	Variable	Variable	Report	Report	401 KAR 5:080, Section 1(2)(c)2
Alkalinity[1] (as mg/l CaCO3)	Variable	Variable	Report	Report	401 KAR 5:080, Section 1(2)(c)2
Oil & Grease[2]	Variable	Variable	10.0 mg/l	15.0 mg/l	401 KAR 5:080, Section 1(2)(c)2
Settleable Solids[3]	Variable	Variable	N/A	0.5 ml/l	401 KAR 5:065, Sections 4 and 5
pH[4] (standard units)	Variable	Variable	6.0 (min.)	9.0 (max.)	401 KAR 10:031, Section 4(1)(b) 401 KAR 5:065, Sections 4 and 5

[1]At all times acidity shall be less than alkalinity.

[2]The limits and monitoring for Oil & Grease do not apply if the permittee has developed and implemented a "Best Management Practices" (BMP) plan as required by this permit. The BMP plan shall include a specific section that addresses the handling, storage and disposal of petroleum products and the maintenance procedures for mining equipment.

[3]The limitation for Settleable Solids is an instantaneous maximum

[4]These types of discharges shall not cause the pH of the receiving stream to fluctuate more that 1.0 standard unit over a period of 24 hours.

12. METHODOLOGY USED IN DETERMINING LIMITATIONS

a. Description of Discharge

Discharges of “acid or ferruginous mine drainage” from “existing source” or “new discharger” post mining areas (reclamation areas) excluding underground mine drainage

b. Effluent Characteristics

Flow	Settleable Solids	Oil & Grease
Acidity	Alkalinity	pH
Conductivity		

c. Pertinent Factors

The term **"acid or ferruginous mine drainage"** means mine drainage which, before any treatment, has a pH of less than 6.0 or has a total recoverable iron concentration equal to or greater than 10.0 mg/l.

The term **"post mining area"** means: 1) A reclamation area; or 2) The underground workings of an underground coal mine after the extraction, removal, or recovery of coal from its natural deposit has ceased and prior to bond release.

The term **"reclamation area"** means the surface area of a coal mine, which has been returned to required contour and on which revegetation (specifically, seeding or planting) work has commenced.

The term **“phase I reclamation bond release”** means release by the Department for Natural Resources of a portion of the performance bond after the following work has been completed: backfilling, re-grading, top soil replacement, drainage control work, including soil preparation, re-grading, seeding, planting, and mulching in accordance with the approved reclamation plan.

The term **"final bond release"** means the time at which the Department for Natural Resources returns any remaining reclamation or performance bond based upon its determination that reclamation work (including, in the case of underground mines, mine sealing, and abandonment procedures) and revegetation requirements have been satisfactorily completed.

The term **“instantaneous maximum”** means the maximum value not to be exceeded at any time.

The limits for post mining areas (reclamation areas)are applicable to discharges for which “phase I reclamation bond release” has been received and remains in effect until “final bond release” is received.

d. Monitoring Requirements

Instantaneous flow measurements shall be collected once per month for the first six (6) months after Phase I Bond Release, then once per quarter thereafter, unless otherwise notified by Cabinet personnel.

Acidity, Alkalinity, Conductivity, Oil & Grease, pH and Settleable Solids shall be monitored once per month for the first six (6) months after Phase I Bond Release, then once per quarter thereafter, unless otherwise notified by Cabinet personnel.

12. METHODOLOGY USED IN DETERMINING LIMITATIONS

e. Justification of Limits

The Kentucky Administrative Regulations (KARs) cited below have been duly promulgated pursuant to the requirements of Chapter 224 of the Kentucky Revised Statutes (KRSs).

Flow and Conductivity
The monitoring requirements for these parameters are consistent with the requirements of 401 KAR 5:065, Section 2(8).

Acidity, Alkalinity, and Oil & Grease
The limits and requirements for these parameters are consistent with the requirements of 401 KAR 5:080, Section 1(2)(c)2. These limits are representative of the Division of Water's "Best Professional Judgment" (BPJ) determination of the "Best Practicable Control Technology Currently Available" (BPT) and "Best Available Technology Economically Achievable" (BAT) requirements for these types of discharges.

Settleable Solids
The limits for this parameter are consistent with the requirements of 401 KAR 5:065, Sections 4 and 5. These limits are representative of the "Best Practicable Control Technology Currently Available" (BPT) and "Best Available Technology Economically Achievable" (BAT) requirements for these types of discharges pursuant to 40 CFR Parts 434.52(a) and 434.53(a).

pH
The limits for this parameter are consistent with the requirements of 401 KAR 10:031, Section 4(1)(b) and 5:065, Sections 4 and 5. These limits are representative of the "Best Practicable Control Technology Currently Available" (BPT) and "Best Available Technology Economically Achievable" (BAT) requirements for these types of discharges pursuant to 40 CFR Parts 434.52(a) and 434.53(a).

13. REPORTED DISCHARGE AND PROPOSED LIMITS

Description of Discharge – Discharges of “acid or ferruginous mine drainage” from “new source” post mining areas (reclamation areas) excluding underground mine drainage

Effluent Characteristics	Reported Discharge Monthly Average	Reported Discharge Daily Maximum	Proposed Limits Monthly Average	Proposed Limits Daily Maximum	Applicable Water Quality Criteria and/or Effluent Guidelines
Flow (MGD)	Variable	Variable	Report	Report	401 KAR 5:065, Section 2(8)
Conductivity (µS/cm)	Variable	Variable	Report	Report	401 KAR 5:065, Section 2(8)
Acidity[1] (as mg/l CaCO3)	Variable	Variable	Report	Report	401 KAR 5:080, Section 1(2)(c)2
Alkalinity[1] (as mg/l CaCO3)	Variable	Variable	Report	Report	401 KAR 5:080, Section 1(2)(c)2
Oil & Grease[2]	Variable	Variable	10.0 mg/l	15.0 mg/l	401 KAR 5:080, Section 1(2)(c)2
Settleable Solids[3]	Variable	Variable	N/A	0.5 ml/l	401 KAR 5:065, Sections 4 and 5
pH[4] (standard units)	Variable	Variable	6.0 (min.)	9.0 (max.)	401 KAR 10:031, Section 4(1)(b) 401 KAR 5:065, Sections 4 and 5

[1]At all times acidity shall be less than alkalinity.

[2]The limits and monitoring for Oil & Grease do not apply if the permittee has developed and implemented a “Best Management Practices” (BMP) plan as required by this permit. The BMP plan shall include a specific section that addresses the handling, storage and disposal of petroleum products and the maintenance procedures for mining equipment.

[3]The limitation for Settleable Solids is an instantaneous maximum

[4]These types of discharges shall not cause the pH of the receiving stream to fluctuate more that 1.0 standard unit over a period of 24 hours.

14. METHODOLOGY USED IN DETERMINING LIMITATIONS

a. Description of Discharge

Discharges of “acid or ferruginous mine drainage” from “new source” post mining areas (reclamation areas) excluding underground mine drainage

b. Effluent Characteristics

Flow	Settleable Solids	Oil & Grease
Acidity	Alkalinity	pH
Conductivity		

c. Pertinent Factors

The term **"acid or ferruginous mine drainage"** means mine drainage which, before any treatment, has a pH of less than 6.0 or has a total recoverable iron concentration equal to or greater than 10.0 mg/l.

The term **"post mining area"** means: 1) A reclamation area; or 2) The underground workings of an underground coal mine after the extraction, removal, or recovery of coal from its natural deposit has ceased and prior to bond release.

The term **"reclamation area"** means the surface area of a coal mine, which has been returned to required contour and on which revegetation (specifically, seeding or planting) work has commenced.

The term **“phase I reclamation bond release”** means release by the Department for Natural Resources of a portion of the performance bond after the following work has been completed: backfilling, re-grading, top soil replacement, drainage control work, including soil preparation, re-grading, seeding, planting, and mulching in accordance with the approved reclamation plan.

The term **"final bond release"** means the time at which the Department for Natural Resources returns any remaining reclamation or performance bond based upon its determination that reclamation work (including, in the case of underground mines, mine sealing, and abandonment procedures) and revegetation requirements have been satisfactorily completed.

The term **“instantaneous maximum”** means the maximum value not to be exceeded at any time.

The limits for post mining areas (reclamation areas)are applicable to discharges for which “phase I reclamation bond release” has been received and remains in effect until “final bond release” is received.

d. Monitoring Requirements

Instantaneous flow measurements shall be collected once per month for the first six (6) months after Phase I Bond Release, then once per quarter thereafter, unless otherwise notified by Cabinet personnel.

Acidity, Alkalinity, Conductivity, Oil & Grease, pH and Settleable Solids shall be monitored once per month for the first six (6) months after Phase I Bond Release, then once per quarter thereafter, unless otherwise notified by Cabinet personnel.

14. METHODOLOGY USED IN DETERMINING LIMITATIONS

e. Justification of Limits

The Kentucky Administrative Regulations (KARs) cited below have been duly promulgated pursuant to the requirements of Chapter 224 of the Kentucky Revised Statutes (KRSs).

Flow and Conductivity
The monitoring requirements for these parameters are consistent with the requirements of 401 KAR 5:065, Section 2(8).

Acidity, Alkalinity, and Oil & Grease
The limits and requirements for these parameters are consistent with the requirements of 401 KAR 5:080, Section 1(2)(c)2. These limits are representative of the Division of Water's "Best Professional Judgment" (BPJ) determination of the "Best Practicable Control Technology Currently Available" (BPT) and "Best Available Technology Economically Achievable" (BAT) requirements for these types of discharges.

Settleable Solids
The limits for this parameter are consistent with the requirements of 401 KAR 5:065, Sections 4 and 5. These limits are representative of the "Best Practicable Control Technology Currently Available" (BPT) and "Best Available Technology Economically Achievable" (BAT) requirements for these types of discharges pursuant to 40 CFR Parts 434.55(a).

pH
The limits for this parameter are consistent with the requirements of 401 KAR 10:031, Section 4(1)(b) and 5:065, Sections 4 and 5. These limits are representative of the "Best Practicable Control Technology Currently Available" (BPT) and "Best Available Technology Economically Achievable" (BAT) requirements for these types of discharges pursuant to 40 CFR Parts 434.55(a).

15. REPORTED DISCHARGE AND PROPOSED LIMITS

Description of Discharge - Discharges of “acid or ferruginous mine drainage” from “existing source” or “new discharger” post mining areas (underground mine drainage)

Effluent Characteristics	Reported Discharge Monthly Average	Reported Discharge Daily Maximum	Proposed Limits Monthly Average	Proposed Limits Daily Maximum	Applicable Water Quality Criteria and/or Effluent Guidelines
Flow (MGD)	Variable	Variable	Report	Report	401 KAR 5:065, Section 2(8)
Conductivity (µS/cm)	Variable	Variable	Report	Report	401 KAR 5:065, Section 2(8)
Acidity[1] (as mg/l $CaCO_3$)	Variable	Variable	Report	Report	401 KAR 5:080, Section 1(2)(c)2
Alkalinity[1] (as mg/l $CaCO_3$)	Variable	Variable	Report	Report	401 KAR 5:080, Section 1(2)(c)2
Oil & Grease[2]	Variable	Variable	10.0 mg/l	15.0 mg/l	401 KAR 5:080, Section 1(2)(c)2
Total Recoverable Iron	Variable	Variable	3.5 mg/l	4.0 mg/l	401 KAR 10:031, Section 6 401 KAR 5:065, Sections 2, 4 and 5
Total Recoverable Manganese	Variable	Variable	2.0 mg/l	4.0 mg/l	401 KAR 5:065, Sections 4 and 5
Total Suspended Solids	Variable	Variable	35.0 mg/l	70.0 mg/l	401 KAR 5:065, Sections 4 and 5
pH[3] Standard units)	Variable	Variable	6.0 (min.)	9.0 (max.)	401 KAR 10:031, Section 4(1)(b) 401 KAR 5:065, Sections 4 and 5

[1]At all times acidity shall be less than alkalinity.

[2]The limits and monitoring for Oil & Grease do not apply if the permittee has developed and implemented a “Best Management Practices” (BMP) plan as required by this permit. The BMP plan shall include a specific section that addresses the handling, storage and disposal of petroleum products and the maintenance procedures for mining equipment.

[3]These types of discharges shall not cause the pH of the receiving stream to fluctuate more that 1.0 standard unit over a period of 24 hours.

16. METHODOLOGY USED IN DETERMINING LIMITATIONS

a. Description of Discharge

Discharges of “acid or ferruginous mine drainage” from “existing source” or “new discharger” post mining areas (underground mine drainage)

b. Effluent Characteristics

Flow	Total Recoverable Iron	Total Recoverable Manganese
Acidity	Alkalinity	Total Suspended Solids
Oil & Grease	Conductivity	pH

c. Pertinent Factors

The term **"acid or ferruginous mine drainage"** means mine drainage which, before any treatment, has a pH of less than 6.0 or has a total recoverable iron concentration equal to or greater than 10.0 mg/l.

The terms **“existing source coal mine”** mean a coal mine that: 1) the discharge of pollutants began prior to May 4, 1984 and 2) received a finally effective KPDES or NPEDS permit for the discharges at that site.

The term **“new discharger coal mine”** means a coal mine: 1) from which there is or may be a new or additional discharge of pollutants at a site at which on May 4, 1984, it had never discharged pollutants; and 2) which has never received a finally effective KPDES or NPDES permit for discharge at that site; and 3) which is not a new source.

The term **"post mining area"** means: 1) A reclamation area; or 2) The underground workings of an underground coal mine after the extraction, removal, or recovery of coal from its natural deposit has ceased and prior to bond release.

The term **“underground workings of an underground mine”** means the underground workings including shafts, adits, support facilities, etc. of an underground mine, but excludes surface disturbances associated with the underground mine.

The limits for post mining areas (underground mine drainage) are applicable to discharges until “final bond release” is received.

d. Monitoring Requirements

Instantaneous flow measurements shall be collected twice per month.

pH, Total Recoverable Iron, Total Recoverable Manganese and Total Suspended Solids shall be monitored twice per month by grab sample.

Acidity, Alkalinity, Conductivity, Oil & Grease shall be monitored once per month by grab sample.

16. METHODOLOGY USED IN DETERMINING LIMITATIONS

e. Justification of Limits

The Kentucky Administrative Regulations (KARs) cited below have been duly promulgated pursuant to the requirements of Chapter 224 of the Kentucky Revised Statutes (KRSs).

Flow and Conductivity
The monitoring requirements for these parameters are consistent with the requirements of 401 KAR 5:065, Section 2(8).

Acidity, Alkalinity, and Oil & Grease
The limits and requirements for these parameters are consistent with the requirements of 401 KAR 5:080, Section 1(2)(c)2. These limits are representative of the Division of Water's "Best Professional Judgment" (BPJ) determination of the "Best Practicable Control Technology Currently Available" (BPT) and "Best Available Technology Economically Achievable" (BAT) requirements for these types of discharges.

Total Recoverable Manganese and Total Suspended Solids
The limits for these parameters are consistent with the requirements of 401 KAR 5:065, Sections 4 and 5. These limits are representative of the "Best Practicable Control Technology Currently Available" (BPT) and "Best Available Technology Economically Achievable" (BAT) requirements for these types of discharges pursuant to 40 CFR Parts 434.52(b)(1) and 434.53(b)(1).

Total Recoverable Iron
The limits for this parameter are consistent with the requirements of 401 KAR 10:031, Section 6 and 401 KAR 5:065, Sections 2, 4 & 5. These limits are representative of the "Best Practicable Control Technology Currently Available" (BPT) and "Best Available Technology Economically Achievable" (BAT) requirements for these types of discharges pursuant to 40 CFR Parts 434.52(b)(1) and 434.53(b)(1). Based on EPA memorandums from August 13, 1998 and May 21, 1996 the terms Total Iron and Total Recoverable Iron are synonymous therefore as Kentucky's Water Quality Criteria are expressed terms of total recoverable the term Total Recoverable Iron shall be used. Pursuant to 401 KAR 5:065, Section 2(4) water quality standards are to be included in the KPDES permit when it is necessary to achieve water quality standards. Title 401 KAR 10:031, Section 6 Table 1 establishes an acute criterion of 4.0 mg/l and a chronic criterion of 1.0 mg/l for this parameter. Footnote 8 of that table states that the chronic criterion of 1.0 mg/l for iron shall not exceed 3.5 mg/l if aquatic life has not been shown to be adversely impacted. The Division of Water is therefore implementing only the acute criterion as a daily maximum in this permit. The implementation of the chronic criterion would indicate that the aquatic life of that segment of the receiving stream had been adversely impacted and therefore would render any discharge to that segment ineligible for general permit coverage and necessitate an individual permit.

pH
The limits for this parameter are consistent with the requirements of 401 KAR 10:031, Section 4(1)(b) and 5:065, Sections 4 and 5. These limits are representative of the "Best Practicable Control Technology Currently Available" (BPT) and "Best Available Technology Economically Achievable" (BAT) requirements for these types of discharges pursuant to 40 CFR Parts 434.52(b)(1) and 434.53(b)(1).

17. REPORTED DISCHARGE AND PROPOSED LIMITS

Description of Discharge – Discharges of “acid or ferruginous mine drainage” from “new source” post mining areas (underground mine drainage)

Effluent Characteristics	Reported Discharge Monthly Average	Reported Discharge Daily Maximum	Proposed Limits Monthly Average	Proposed Limits Daily Maximum	Applicable Water Quality Criteria and/or Effluent Guidelines
Flow (MGD)	Variable	Variable	Report	Report	401 KAR 5:065, Section 2(8)
Conductivity (µS/cm)	Variable	Variable	Report	Report	401 KAR 5:065, Section 2(8)
Acidity[1] (as mg/l $CaCO_3$)	Variable	Variable	Report	Report	401 KAR 5:080, Section 1(2)(c)2
Alkalinity[1] (as mg/l $CaCO_3$)	Variable	Variable	Report	Report	401 KAR 5:080, Section 1(2)(c)2
Oil & Grease[2]	Variable	Variable	10.0 mg/l	15.0 mg/l	401 KAR 5:080, Section 1(2)(c)2
Total Recoverable Iron	Variable	Variable	3.0 mg/l	4.0 mg/l	401 KAR 10:031, Section 6 401 KAR 5:065, Sections 2, 4 and 5
Total Recoverable Manganese	Variable	Variable	2.0 mg/l	4.0 mg/l	401 KAR 5:065, Sections 4 and 5
Total Suspended Solids	Variable	Variable	35.0 mg/l	70.0 mg/l	401 KAR 5:065, Sections 4 and 5
pH[3] Standard units)	Variable	Variable	6.0 (min.)	9.0 (max.)	401 KAR 10:031, Section 4(1)(b) 401 KAR 5:065, Sections 4 and 5

[1]At all times acidity shall be less than alkalinity.

[2]The limits and monitoring for Oil & Grease do not apply if the permittee has developed and implemented a “Best Management Practices” (BMP) plan as required by this permit. The BMP plan shall include a specific section that addresses the handling, storage and disposal of petroleum products and the maintenance procedures for mining equipment.

[3]These types of discharges shall not cause the pH of the receiving stream to fluctuate more that 1.0 standard unit over a period of 24 hours.

18. METHODOLOGY USED IN DETERMINING LIMITATIONS

a. Description of Discharge

Discharges of “acid or ferruginous mine drainage” from “existing source” or “new discharger” post mining areas (underground mine drainage)

b. Effluent Characteristics

Flow	Total Recoverable Iron	Total Recoverable Manganese
Acidity	Alkalinity	Total Suspended Solids
Oil & Grease	Conductivity	pH

c. Pertinent Factors

The term **"acid or ferruginous mine drainage"** means mine drainage which, before any treatment, has a pH of less than 6.0 or has a total recoverable iron concentration equal to or greater than 10.0 mg/l.

The terms **"coal mine”** means a coal mine on which construction is commenced after May 4, 1984 or which is determined by the Director of the KYDOW to constitute a "major alteration."

The term **“major alteration”** means a coal mine for which the KYDOW determines that a new, altered, or increased discharge of pollutants has occurred after May 4, 1984, in connection with the mine for which the KPDES permit is being considered. In making this determination, the KYDOW shall take into account one (1) or more of the following events: 1) Extraction of a coal seam not previously extracted by that mine; 2) Discharge into a drainage area not previously affected by wastewater discharges from the mine; 3) Extensive new surface disturbance at the mining operation; 4) Construction of a new shaft, slope, or drift; and 5) Such other factors as the Director of the KYDOW deems relevant.

The term **"post mining area"** means: 1) A reclamation area; or 2) The underground workings of an underground coal mine after the extraction, removal, or recovery of coal from its natural deposit has ceased and prior to bond release.

The term **“underground workings of an underground mine”** means the underground workings including shafts, adits, support facilities, etc. of an underground mine, but excludes surface disturbances associated with the underground mine.

The limits for post mining areas (underground mine drainage) are applicable to discharges until “final bond release” is received.

d. Monitoring Requirements

Instantaneous flow measurements shall be collected twice per month.

pH, Total Recoverable Iron, Total Recoverable Manganese and Total Suspended Solids shall be monitored twice per month by grab sample.

Acidity, Alkalinity, Conductivity, Oil & Grease shall be monitored once per month by grab sample.

18. METHODOLOGY USED IN DETERMINING LIMITATIONS

e. Justification of Limits

The Kentucky Administrative Regulations (KARs) cited below have been duly promulgated pursuant to the requirements of Chapter 224 of the Kentucky Revised Statutes (KRSs).

Flow and Conductivity
The monitoring requirements for these parameters are consistent with the requirements of 401 KAR 5:065, Section 2(8).

Acidity, Alkalinity, and Oil & Grease
The limits and requirements for these parameters are consistent with the requirements of 401 KAR 5:080, Section 1(2)(c)2. These limits are representative of the Division of Water's "Best Professional Judgment" (BPJ) determination of the "Best Practicable Control Technology Currently Available" (BPT) and "Best Available Technology Economically Achievable" (BAT) requirements for these types of discharges.

Total Recoverable Manganese and Total Suspended Solids
The limits for these parameters are consistent with the requirements of 401 KAR 5:065, Sections 4 and 5. These limits are representative of the "New Source Performance" (NSPS) requirements for these types of discharges pursuant to 40 CFR Parts 434.55 (b)(1).

Total Recoverable Iron
The limits for this parameter are consistent with the requirements of 401 KAR 10:031, Section 6 and 401 KAR 5:065, Sections 2, 4 & 5. These limits are representative of the "New Source Performance" (NSPS) requirements for these types of discharges pursuant to 40 CFR Parts 434.55(b)(1). Based on EPA memorandums from August 13, 1998 and May 21, 1996 the terms Total Iron and Total Recoverable Iron are synonymous therefore as Kentucky's Water Quality Criteria are expressed terms of total recoverable the term Total Recoverable Iron shall be used. Pursuant to 401 KAR 5:065, Section 2(4) water quality standards are to be included in the KPDES permit when it is necessary to achieve water quality standards. Title 401 KAR 10:031, Section 6 Table 1 establishes an acute criterion of 4.0 mg/l and a chronic criterion of 1.0 mg/l for this parameter. Footnote 8 of that table states that the chronic criterion for iron shall not exceed 3.5 mg/l if aquatic life has not been shown to be adversely impacted. The Division of Water is therefore implementing only the acute criterion as a daily maximum in this permit. The implementation of the chronic criterion of 1.0 mg/l would indicate that the aquatic life of that segment of the receiving stream had been adversely impacted and therefore would render any discharge to that segment ineligible for general permit coverage and necessitate an individual permit.

pH
The limits for this parameter are consistent with the requirements of 401 KAR 10:031, Section 4(1)(b) and 5:065, Sections 4 and 5. These limits are representative of the "New Source Performance" (NSPS) requirements for these types of discharges pursuant to 40 CFR Parts 434.55(b)(1).

19. ANTIDEGRADATION

In September 2004 Kentucky promulgated regulation 401 KAR 5:030 Antidegradation Policy Implementation Procedures. On April 12, 2005 after three clarification letters dated August 10, 2004, February 25, 2005 and April 11, 2005 EPA approved the regulation. Subsequent lawsuits by environmental groups were finally decided on September 3, 2008 the Sixth Circuit Court of Appeals remanded portions of the regulation. In particular the exemptions provided for certain types of permits and the ability to opt for more stringent limitations in lieu of performing an alternatives analysis and socioeconomic demonstration. With this decision the processes established under the three clarifications were nullified. Currently the only option available for new or expanded operations seeking a KPDES permit is to complete the alternatives analysis and socioeconomic demonstration. All such demonstrations and subsequent permitting actions whether the drafting of an individual permit or the propose authorization under a general permit requires KDOW to public notice this action. The following procedures shall be implemented in this general permit.

Existing

For existing facilities which received coverage prior to the expiration of this permit on December 31, 2008 the conditions of 401 KAR 5:029, Section 1 have been satisfied by this permit action. The renewal of coverage for existing facilities which are not expanding does not require a review under 401 KAR 5:030 Section 1.

New or Expanding

New or expanding operations however are subject to the requirements of 401 KAR 5:030, Section 1 and an alternatives analysis and socioeconomic demonstration shall be conducted prior to the proposed granting of authorization under the general permit. This permit requires an alternatives analysis and socioeconomic demonstration (DOW Form HQAA) to be submitted as a component of the notice of intent (NOI) for coverage under this permit. KDOW shall prepare a Fact Sheet and a Draft Coverage Letter which will be noticed through KDOW's normal public notice procedures thus allowing public input.

20. PROPOSED COMPLIANCE SCHEDULE FOR ATTAINING EFFLUENT LIMITATIONS

Permittee shall install, implement and maintain those controls necessary to assure compliance with all conditions and effluent limitations of this permit including those consistent with Kentucky's numerical and narrative water quality standards by the effective date of the permit with the following exception.

Existing facilities which received coverage prior to the expiration of this permit on December 31, 2008 shall have one year from the effective date of this general permit to achieve compliance with the daily maximum limit of 4.0 mg/l for total recoverable iron. Due to interpretational changes regarding total metals versus total recoverable metals KDOW is providing this compliance period to allow existing facilities sufficient time to make treatment corrections if necessary. Further justification is provided in the following discussion.

Prior to the initial drafting of the coal general permit an issue was raised regarding total metals versus total recoverable metals. In previous versions of the coal general permit both total iron and total recoverable iron were being monitoring and limited as separate parameters. However, based on EPA memorandums from August 13, 1998 and May 21, 1996 the terms Total Iron and Total Recoverable Iron are synonymous therefore as Kentucky's Water Quality Criteria are expressed terms of total recoverable the term Total Recoverable Iron shall be used.

Pursuant to 401 KAR 5:065, Section 2(4) water quality standards are to be included in the KPDES permit when it is necessary to achieve water quality standards. Title 401 KAR 10:031, Section 6 Table 1 establishes an acute criterion of 4.0 mg/l and a chronic criterion of 1.0 mg/l for this parameter. Footnote 8 of that table states that the chronic criterion for iron shall not exceed 3.5 mg/l if aquatic life has not been shown to be adversely impacted. The Division of Water is therefore implementing only the acute criterion as a daily maximum in this permit. The implementation of the chronic criterion of 1.0 mg/l would indicate that the aquatic life of that segment of the receiving stream had been adversely impacted and therefore would render any discharge to that segment ineligible for general permit coverage and necessitate an individual permit.

21. PROPOSED SPECIAL CONDITIONS WHICH WILL HAVE A SIGNIFICANT IMPACT ON THE DISCHARGE

Alkaline Mine Reclassification

The procedures for reclassifying an operation from "acid or ferruginous" mine drainage to "alkaline" mine drainage are consistent with the requirements of 401 KAR 5:065, Section 2, 4 and 5 and 401 KAR 5:070, Section 6. "Alkaline mine drainage" is defined in the Coal Mining Point Source Category Effluent Guidelines (General Definitions – 40 CFR 434.11) as mine drainage which prior to any treatment has a pH equal to or greater than 6.0 standard units and a Total Recoverable Iron concentration of less than 10 mg/l. The effect of reclassifying the mine from "acid or ferruginous" to "alkaline" is to remove the effluent limitations and monitoring requirements for total recoverable manganese. Pursuant to the requirements of 401 KAR 5:070, Section 6 such an action constitutes a major modification and necessitates the reopening of the KPDES permit. As this is a general permit there are a number of administrative and logistical issues that preclude the reopening of the general permit to allow for this reclassification therefore KDOW will require the permittee to obtain an individual permit to effect this reclassification.

21. PROPOSED SPECIAL CONDITIONS WHICH WILL HAVE A SIGNIFICANT IMPACT ON THE DISCHARGE

Alternate Effluent Limitations - pH

The procedures for requesting an alternate pH final effluent limit to allow for removal of total recoverable manganese are consistent with the requirements of 401 KAR 5:065, Section 2(1), 4 and 5. In accordance with the Coal Mining Point Source Category Effluent Guidelines (Alternate effluent limitation for pH – 40 CFR 434.61) the permit issuing authority may allow the pH level in the final effluent to exceed 9.0 standard units to a small extent in order that total recoverable manganese limitations may be achieved when the application of neutralization and sedimentation treatment technology results in the inability to comply.

Alternate Effluent Limitations - Precipitation

The procedures for requesting an alternate precipitation effluent limit are consistent with the requirements of 401 KAR 5:065, Section 2(1), 4 and 5. In accordance with the Coal Mining Point Source Category Effluent Guidelines (Alternate effluent limitation for precipitation events – 40 CFR 434.63) the permit issuing authority may grant on an event-by-event basis alternate effluent limitations based on type of discharge and preceding 24-hour precipitation.

Authorization to Discharge

For existing operations which were granted authorization by previous versions of this general permit authorization to discharge is extended upon the effective date of this general permit. For new or expanded operations authorization to discharge under the terms of this general permit shall be effective upon the issuance of written notification by the KYDOW and upon the issuance of a fully effective permanent program permit by DNR.

Best Management Practices (BMP) Plan

Pursuant to 401 KAR 5:065, Section 2(10), a BMP requirement shall be included: to control or abate the discharge of pollutants from ancillary areas containing toxic or hazardous substances or those substances which could result in an environmental emergency; where numeric effluent limitations are infeasible; or to carry out the purposes and intent of KRS 224. Ancillary activities associated with mining operations include the storage and distribution of petroleum based products, equipment repair and maintenance activities, haul roads, exploration sites and access areas. Such activities have the potential to discharge to waters of the commonwealth without being directed through existing treatment units.

Benthic Macroinvertebrate Assessment

As a result of recent studies demonstrating a correlation between coal mining activities and adverse biological impacts on receiving waters EPA has mandated that KDOW include a condition in the general permit requiring all operations covered by this reissued general permit to conduct a one-time benthic macroinvertebrate assessment immediately downstream of an outfall in each watershed impacted by the mining operation. Pursuant to 401 KAR 5:065, Section 1(8) the permittee has the duty to provide any information the Cabinet may request to determine whether cause exists to modify, revoke and reissue, or revoke a permit.

21. PROPOSED SPECIAL CONDITIONS WHICH WILL HAVE A SIGNIFICANT IMPACT ON THE DISCHARGE

Commingling of Wastestreams

Where wastestreams from any facility covered by this permit are combined for treatment or discharge with wastestreams from another facility, the concentration of each pollutant in the combined discharge may not exceed the most stringent limitations for that pollutant applicable to any component wastestream of the discharge. This requirement is consistent with the requirements of 401 KAR 5:065, Sections 4 and 5 (40 CFR Part 434.61).

Department of the Army, Corps of Engineers Condition

Pursuant to the requirements of 40 CFR 124.59(a) and 401 KAR 5:075, Section 9 the following special condition is applicable to certain coal mining operations, which affect anchorage and navigation of any waters of the United States, which are under the jurisdiction of the Corps of Engineers. The applicability of this condition to specific dischargers will be included in the written notice from the DOW that authorizes discharge under this permit.

The permittee shall undertake erosion control practices which utilize proper sedimentation control measures in order to minimize resultant sedimentation in navigable waters which occur as a result of discharges from both point and non-point sources connected with the overall operations. The practices will apply to existing and future facilities and activities, and will, at a minimum, provide for the control of erosion and runoff from access and haul roads, coal handling structures, utility right-of-way easements, and excavations. The permittee will also provide adequate ditching, culverts, sediment traps and ponds, and other structures or procedures necessary to minimize sedimentation in navigable waters. The DOW shall have the right to inspect the sediment control measures being undertaken by the permittee and, in consultation with the U.S. Army Corps of Engineers, direct any additional measures which are necessary to comply with the requirements of this condition. Should this discharge result in sufficient deposition of solids material to create a hazard to anchorage or navigation on any navigable water, such deposits will be removed by the permittee without expense to the United States Government. Further, the time and manner of such removal, as well as the location and manner of its disposal, must receive the prior written approval by the District Engineer of the Corps of Engineers.

In-stream Treatment or Disposal Facilities

This permit does not authorize the construction or use of in-stream treatment or disposal facilities (sediment ponds, hollow fills, valley fills, slurry ponds, etc.) Such authorization is within the jurisdiction of the Corps of Engineers (COE) and is implemented through the Section 404 permitting program of the Clean Water Act. Since the COE is a federal agency, this permitting action requires the issuance of a Section 401 Water Quality Certification by the Division of Mine Permits. The requirements of the 401 Water Quality Certification issued for this operation are hereby incorporated by reference into the KPDES permit as enforceable requirements.

21. PROPOSED SPECIAL CONDITIONS WHICH WILL HAVE A SIGNIFICANT IMPACT ON THE DISCHARGE

Information Requirements Existing Coal Mines

Pursuant to 401 KAR 5:065, Section 1(8) the permittee has the duty to provide any information the Cabinet may request to determine whether cause exists to modify, revoke and reissue, or revoke a permit. As a result of recent comments from EPA, KDOW has included a condition in the general permit requiring the existing permittees analytical data from a representative outfall in each effected watershed for the following parameters: Total Recoverable (Antimony, Arsenic, Beryllium, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, Selenium, Silver, Thallium and Zinc), Free Cyanide, Total Phenols, and Hardness (as mg/l $CaCO_3$).

Notice Of Intent (NOI) Requirements

To obtain new coverage or modification of coverage under KYG04 the permittee shall submit electronically a Notice of Intent (NOI) Form NOI-CM revised April 2009 and a completed Form HQAA. The revised NOI-CM form requires the following information (see form for details):

Section I – Permittee Information
Section II – General Site Information
Section III – Specific Site Information
Section IV – COE CWA Section 404 Permit Information
Section V – Other Environmental Approvals and Permit Information
Section VI – Effluent Characteristics
Section VII – Best Management Practices (BMP) Plan
Section VIII - Certification
Section IX -NOI preparer information
USGS topographic map
Mining and Reclamation Map

Changes to the form include the addition of e-mail addresses for the permittee and the consultant and the modification of Section VI from Stream Characteristics to Effluent Characteristics.

The addition of e-mail addresses will allow KYDOW to electronically notify the permittee and consultant that coverage has been granted or that an individual permit is required thus allowing a more expeditious notification process.

During the term of the previous KYG04 EPA Region IV raised an issue related to the NOI process. After numerous discussions it was determined that discharge data similar to that required for an individual KPDES permit for a coal mining activity, i.e. Form C Section V Part C – Metals, Cyanide, and Total Phenols which includes. Total Recoverable (Antimony, Arsenic, Beryllium, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, Selenium, Silver, Thallium and Zinc), Free Cyanide, and Total Phenols would be required. Additional comments from EPA during the two previous drafts have resulted in the addition of Hardness (as mg/l $CaCO_3$) and Conductivity. Therefore KYDOW is modifying NOI-CM to include the requirement to collect a sample of the discharge and report the analytical results as part of the NOI submission.

Thus with this additional requirement mandated by EPA Region IV KYDOW has re-evaluated the utility of the Stream Characteristics Data Sheets and has determined the effluent data would prove to be more useful therefore the Stream Characteristics Section has been replaced with the Effluent Characteristics Section.

22. PERMIT DURATION

Five (5) years

23. PERMIT INFORMATION

The application, draft permit fact sheet, public notice, comments received and additional information is available by writing the Division of Water at 200 Fair Oaks Lane, Frankfort, Kentucky 40601.

24. REFERENCES AND CITED DOCUMENTS

All material and documents referenced or cited in this fact sheet are parts of the permit information as described above and are readily available at the Division of Water Central Office. Information regarding these materials may be obtained from the person listed below.

25. CONTACT

For further information contact the individual identified on the Public Notice or Larry Sowder at (502) 564-3410 extensions 4924, or by e-mail at Larry.Sowder@ky.gov.

26. PUBLIC NOTICE INFORMATION

Please refer to the attached Public Notice for details regarding the procedures for a final permit decision, deadline for comments, and other information required by 401 KAR 5:075, Section 4(2)(e).

KPDES

KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

COAL GENERAL PERMIT

PERMIT NO.: KYG040000
AI NO.: 35050

AUTHORIZATION TO DISCHARGE UNDER THE KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

Pursuant to Authority in KRS 224,

Those coal mining operations, which have obtained or are in the process of obtaining a Surface Mining Control and Reclamation Act (SMCRA) Permanent Program Permit from the Department for Natural Resources (DNR), pursuant to Chapter 350 of the Kentucky Revised Statutes (KRS) and Title 405 of the Kentucky Administrative Regulations (KARs). Here after referenced as a Permanent Program Permit.

is authorized to discharge from a facility located at

Those coal mining operations located within the 120 counties of the Commonwealth of Kentucky.

to receiving waters named

Those water bodies of the Commonwealth that comprise the Mississippi and Ohio River basins and sub-basins within the political and geographic boundaries of Kentucky.

in accordance with effluent limitations, monitoring requirements, and other conditions set forth in PARTS I, II, III, and IV hereof. The permit consists of this cover sheet, and PART I 18 pages, PART II 1 page, PART III 4 pages, and PART IV 3 pages.

This permit shall become effective on

This permit and the authorization to discharge shall expire at midnight,

Date Signed

Sandra L. Gruzesky, Director
Division of Water

A1. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Description of Discharge - Discharges of "acid or ferruginous mine drainage" from "existing source" or "new discharger" coal preparation plants and coal preparation plant associated areas

During the period beginning on the effective date of this permit and lasting through either Phase I bond release or the term of this permit, the permittee is authorized to discharge from all point source discharges as described in the SCMRA permit

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS (lbs/day)		Other Units (Specify)		MONITORING REQUIREMENTS	
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.	Measurement Frequency	Sample Type
Flow (MGD)	Report	Report	N/A	N/A	2/Month	Instantaneous
Total Suspended Solids (mg/l)	N/A	N/A	35	70	2/Month	Grab
Total Recoverable Iron (mg/l)	N/A	N/A	3.5	4.0	2/Month	Grab
Total Recoverable Manganese (mg/l)	N/A	N/A	2.0	4.0	2/Month	Grab
Oil & Grease[1] (mg/l)	N/A	N/A	10	15	1/Month	Grab
Conductivity (µS/cm)	N/A	N/A	Report	Report	1/Month	Grab
Acidity[2] (as mg/l $CaCO_3$)	N/A	N/A	Report	Report	1/Month	Grab
Alkalinity[2] (as mg/l $CaCO_3$)	N/A	N/A	Report	Report	1/Month	Grab

[1]The limits and monitoring for Oil & Grease do not apply if the permittee has developed and implemented a "Best Management Practices" (BMP) plan as required by this permit. The BMP plan shall include a specific section that addresses the handling, storage and disposal of petroleum products and the maintenance procedures for mining equipment.

[2]At all times acidity shall be less than alkalinity.

The pH of the effluent shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored 2/Month by grab sample. These types of discharges shall not cause the pH of the receiving stream to fluctuate more that 1.0 standard unit over a period of 24 hours.

There shall be no discharge of floating solids or visible foam or sheen in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: nearest accessible point prior to discharge to or mixing with the receiving waters or wastestreams from other outfalls.

The abbreviation N/A means Not Applicable.

A2. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Description of Discharge - Discharges of "acid or ferruginous mine drainage" from "new source" coal preparation plants and coal preparation plant associated areas

During the period beginning on the effective date of this permit and lasting through either Phase I bond release or the term of this permit, the permittee is authorized to discharge from all point source discharges as described in the SCMRA permit

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS (lbs/day)		Other Units (Specify)		MONITORING REQUIREMENTS	
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.	Measurement Frequency	Sample Type
Flow (MGD)	Report	Report	N/A	N/A	2/Month	Instantaneous
Total Suspended Solids (mg/l)	N/A	N/A	35	70	2/Month	Grab
Total Recoverable Iron (mg/l)	N/A	N/A	3.0	4.0	2/Month	Grab
Total Recoverable Manganese (mg/l)	N/A	N/A	2.0	4.0	2/Month	Grab
Oil & Grease[1] (mg/l)	N/A	N/A	10	15	1/Month	Grab
Conductivity (µS/cm)	N/A	N/A	Report	Report	1/Month	Grab
Acidity[2] (as mg/l $CaCO_3$)	N/A	N/A	Report	Report	1/Month	Grab
Alkalinity[2] (as mg/l $CaCO_3$)	N/A	N/A	Report	Report	1/Month	Grab

[1]The limits and monitoring for Oil & Grease do not apply if the permittee has developed and implemented a "Best Management Practices" (BMP) plan as required by this permit. The BMP plan shall include a specific section that addresses the handling, storage and disposal of petroleum products and the maintenance procedures for mining equipment.

[2]At all times acidity shall be less than alkalinity.

The pH of the effluent shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored 2/Month by grab sample. These types of discharges shall not cause the pH of the receiving stream to fluctuate more that 1.0 standard unit over a period of 24 hours.

There shall be no discharge of floating solids or visible foam or sheen in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: nearest accessible point prior to discharge to or mixing with the receiving waters or wastestreams from other outfalls.

The abbreviation N/A means Not Applicable.

A3. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Description of Discharge - Discharges of "acid or ferruginous mine drainage" from "existing source" or "new discharger" coal mines excluding coal preparation plants and coal preparation plant associated areas

During the period beginning on the effective date of this permit and lasting through either Phase I bond release or the term of this permit, the permittee is authorized to discharge from all point source discharges as described in the SCMRA permit

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS (lbs/day)		DISCHARGE LIMITATIONS Other Units (Specify)		MONITORING REQUIREMENTS	
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.	Measurement Frequency	Sample Type
Flow (MGD)	Report	Report	N/A	N/A	2/Month	Instantaneous
Total Suspended Solids (mg/l)	N/A	N/A	35	70	2/Month	Grab
Total Recoverable Iron (mg/l)	N/A	N/A	3.5	4.0	2/Month	Grab
Total Recoverable Manganese (mg/l)	N/A	N/A	2.0	4.0	2/Month	Grab
Oil & Grease[1] (mg/l)	N/A	N/A	10	15	1/Month	Grab
Conductivity (µS/cm)	N/A	N/A	Report	Report	1/Month	Grab
Acidity[2] (as mg/l $CaCO_3$)	N/A	N/A	Report	Report	1/Month	Grab
Alkalinity[2] (as mg/l $CaCO_3$)	N/A	N/A	Report	Report	1/Month	Grab

[1]The limits and monitoring for Oil & Grease do not apply if the permittee has developed and implemented a "Best Management Practices" (BMP) plan as required by this permit. The BMP plan shall include a specific section that addresses the handling, storage and disposal of petroleum products and the maintenance procedures for mining equipment.

[2]At all times acidity shall be less than alkalinity.

The pH of the effluent shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored 2/Month by grab sample. These types of discharges shall not cause the pH of the receiving stream to fluctuate more that 1.0 standard unit over a period of 24 hours.

There shall be no discharge of floating solids or visible foam or sheen in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: nearest accessible point prior to discharge to or mixing with the receiving waters or wastestreams from other outfalls.

The abbreviation N/A means Not Applicable.

A4. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Description of Discharge - Discharges of "acid or ferruginous mine drainage" from "new source" active mining areas, excluding coal preparation plants and coal preparation plant associated areas

During the period beginning on the effective date of this permit and lasting through either Phase I bond release or the term of this permit, the permittee is authorized to discharge from all point source discharges as described in the SCMRA permit

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS (lbs/day)		Other Units (Specify)		MONITORING REQUIREMENTS	
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.	Measurement Frequency	Sample Type
Flow (MGD)	Report	Report	N/A	N/A	2/Month	Instantaneous
Total Suspended Solids (mg/l)	N/A	N/A	35	70	2/Month	Grab
Total Recoverable Iron (mg/l)	N/A	N/A	3.0	4.0	2/Month	Grab
Total Recoverable Manganese (mg/l)	N/A	N/A	2.0	4.0	2/Month	Grab
Oil & Grease[1] (mg/l)	N/A	N/A	10	15	1/Month	Grab
Conductivity (µS/cm)	N/A	N/A	Report	Report	1/Month	Grab
Acidity[2] (as mg/l $CaCO_3$)	N/A	N/A	Report	Report	1/Month	Grab
Alkalinity[2] (as mg/l $CaCO_3$)	N/A	N/A	Report	Report	1/Month	Grab

[1]The limits and monitoring for Oil & Grease do not apply if the permittee has developed and implemented a "Best Management Practices" (BMP) plan as required by this permit. The BMP plan shall include a specific section that addresses the handling, storage and disposal of petroleum products and the maintenance procedures for mining equipment.

[2]At all times acidity shall be less than alkalinity.

The pH of the effluent shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored 2/Month by grab sample. These types of discharges shall not cause the pH of the receiving stream to fluctuate more that 1.0 standard unit over a period of 24 hours.

There shall be no discharge of floating solids or visible foam or sheen in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: nearest accessible point prior to discharge to or mixing with the receiving waters or wastestreams from other outfalls.

The abbreviation N/A means Not Applicable.

A5. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Description of Discharge – Discharges of "acid or ferruginous mine drainage" from "existing source" or "new discharger" post mining areas (reclamation areas) excluding underground mine drainage

During the period beginning on the effective date of this permit and lasting through either Phase III bond release or the term of this permit, the permittee is authorized to discharge from all point source discharges as described in the SCMRA permit

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS (lbs/day)		Other Units (Specify)		MONITORING REQUIREMENTS	
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.	Measurement Frequency	Sample Type
Flow (MGD)	Report	Report	N/A	N/A	1/Month	Instantaneous
Settleable Solids[1] (mg/l)	N/A	N/A	N/A	0.5	1/Month	Grab
Oil & Grease[2] (mg/l)	N/A	N/A	10	15	1/Month	Grab
Acidity[3] (as mg/l $CaCO_3$)	N/A	N/A	Report	Report	1/Month	Grab
Alkalinity[3] (as mg/l $CaCO_3$)	N/A	N/A	Report	Report	1/Month	Grab
Conductivity (µS/cm)	N/A	N/A	Report	Report	1/Month	Grab

[1]The daily maximum limit for Settleable Solids is an "instantaneous maximum" not to be exceeded at any time.

[2]The limits and monitoring for Oil & Grease do not apply if the permittee has developed and implemented a "Best Management Practices" (BMP) plan as required by this permit. The BMP plan shall include a specific section that addresses the handling, storage and disposal of petroleum products and the maintenance procedures for mining equipment.

[3]At all times acidity shall be less than alkalinity.

The pH of the effluent shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored 2/Month by grab sample. These types of discharges shall not cause the pH of the receiving stream to fluctuate more that 1.0 standard unit over a period of 24 hours.

There shall be no discharge of floating solids or visible foam or sheen in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: nearest accessible point prior to discharge to or mixing with the receiving waters or wastestreams from other outfalls.

The abbreviation N/A means Not Applicable.

A6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Description of Discharge – Discharges of "acid or ferruginous mine drainage" from "new source" post mining areas (reclamation areas) excluding underground mine drainage

During the period beginning on the effective date of this permit and lasting through either Phase III bond release or the term of this permit, the permittee is authorized to discharge from all point source discharges as described in the SCMRA permit

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS (lbs/day)		DISCHARGE LIMITATIONS Other Units (Specify)		MONITORING REQUIREMENTS	
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.	Measurement Frequency	Sample Type
Flow (MGD)	Report	Report	N/A	N/A	1/Month	Instantaneous
Settleable Solids[1] (mg/l)	N/A	N/A	N/A	0.5	1/Month	Grab
Oil & Grease[2] (mg/l)	N/A	N/A	10	15	1/Month	Grab
Acidity[3] (as mg/l $CaCO_3$)	N/A	N/A	Report	Report	1/Month	Grab
Alkalinity[3] (as mg/l $CaCO_3$)	N/A	N/A	Report	Report	1/Month	Grab
Conductivity (µS/cm)	N/A	N/A	Report	Report	1/Month	Grab

[1]The daily maximum limit for Settleable Solids is an "instantaneous maximum" not to be exceeded at any time.

[2]The limits and monitoring for Oil & Grease do not apply if the permittee has developed and implemented a "Best Management Practices" (BMP) plan as required by this permit. The BMP plan shall include a specific section that addresses the handling, storage and disposal of petroleum products and the maintenance procedures for mining equipment.

[3]At all times acidity shall be less than alkalinity.

The pH of the effluent shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored 2/Month by grab sample. These types of discharges shall not cause the pH of the receiving stream to fluctuate more that 1.0 standard unit over a period of 24 hours.

There shall be no discharge of floating solids or visible foam or sheen in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: nearest accessible point prior to discharge to or mixing with the receiving waters or wastestreams from other outfalls.

The abbreviation N/A means Not Applicable.

A7. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Description of Discharge - Discharges of "acid or ferruginous mine drainage" from "existing source" or "new discharger" post mining areas (underground mine drainage).

During the period beginning on the effective date of this permit and lasting through either Phase III bond release or the term of this permit, the permittee is authorized to discharge from all point source discharges as described in the SCMRA permit

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS (lbs/day)		DISCHARGE LIMITATIONS Other Units (Specify)		MONITORING REQUIREMENTS	
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.	Measurement Frequency	Sample Type
Flow (MGD)	Report	Report	N/A	N/A	2/Month	Instantaneous
Total Suspended Solids (mg/l)	N/A	N/A	35	70	2/Month	Grab
Total Recoverable Iron (mg/l)	N/A	N/A	3.5	4.0	2/Month	Grab
Total Recoverable Manganese (mg/l)	N/A	N/A	2.0	4.0	2/Month	Grab
Oil & Grease[1] (mg/l)	N/A	N/A	10	15	1/Month	Grab
Conductivity (µS/cm)	N/A	N/A	Report	Report	1/Month	Grab
Acidity[2] (as mg/l $CaCO_3$)	N/A	N/A	Report	Report	1/Month	Grab
Alkalinity[2] (as mg/l $CaCO_3$)	N/A	N/A	Report	Report	1/Month	Grab

[1]The limits and monitoring for Oil & Grease do not apply if the permittee has developed and implemented a "Best Management Practices" (BMP) plan as required by this permit. The BMP plan shall include a specific section that addresses the handling, storage and disposal of petroleum products and the maintenance procedures for mining equipment.

[2]At all times acidity shall be less than alkalinity.

The pH of the effluent shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored 2/Month by grab sample. These types of discharges shall not cause the pH of the receiving stream to fluctuate more that 1.0 standard unit over a period of 24 hours.

There shall be no discharge of floating solids or visible foam or sheen in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: nearest accessible point prior to discharge to or mixing with the receiving waters or wastestreams from other outfalls.

The abbreviation N/A means Not Applicable.

A8. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Description of Discharge - Discharges of “acid or ferruginous mine drainage” from “new source” post mining areas (underground mine drainage).

During the period beginning on the effective date of this permit and lasting through either Phase III bond release or the term of this permit, the permittee is authorized to discharge from all point source discharges as described in the SCMRA permit

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS (lbs/day)		DISCHARGE LIMITATIONS Other Units (Specify)		MONITORING REQUIREMENTS	
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.	Measurement Frequency	Sample Type
Flow (MGD)	Report	Report	N/A	N/A	2/Month	Instantaneous
Total Suspended Solids (mg/l)	N/A	N/A	35	70	2/Month	Grab
Total Recoverable Iron (mg/l)	N/A	N/A	3.0	4.0	2/Month	Grab
Total Recoverable Manganese (mg/l)	N/A	N/A	2.0	4.0	2/Month	Grab
Oil & Grease[1] (mg/l)	N/A	N/A	10	15	1/Month	Grab
Conductivity (µS/cm)	N/A	N/A	Report	Report	1/Month	Grab
Acidity[2] (as mg/l $CaCO_3$)	N/A	N/A	Report	Report	1/Month	Grab
Alkalinity[2] (as mg/l $CaCO_3$)	N/A	N/A	Report	Report	1/Month	Grab

[1]The limits and monitoring for Oil & Grease do not apply if the permittee has developed and implemented a “Best Management Practices” (BMP) plan as required by this permit. The BMP plan shall include a specific section that addresses the handling, storage and disposal of petroleum products and the maintenance procedures for mining equipment.

[2]At all times acidity shall be less than alkalinity.

The pH of the effluent shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored 2/Month by grab sample. These types of discharges shall not cause the pH of the receiving stream to fluctuate more that 1.0 standard unit over a period of 24 hours.

There shall be no discharge of floating solids or visible foam or sheen in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: nearest accessible point prior to discharge to or mixing with the receiving waters or wastestreams from other outfalls.

The abbreviation N/A means Not Applicable.

B. OTHER REQUIREMENTS

Alkaline Mine Reclassification

Title 40 Chapter I Subpart 434.11 "General Definitions" defines "alkaline mine drainage" as mine drainage, before any treatment, has a pH equal to or greater than 6.0 standard units and a Total Iron concentration of 10 mg/l. As information is unavailable at the time the applicant submits an NOI for coverage under the general permit the default classification for all mine drainage is "acid or ferruginous". Should the permittee have reason to believe the drainage from an operation would be more appropriately classified as "alkaline" the permittee must satisfactorily demonstrate to KDOW that the mine drainage , prior to treatment, has a pH greater than or equal to 6.0 standard units and a Total Recoverable Iron concentration less than 10 mg/l.

This demonstration shall consist of a mine map with the monitoring locations clearly labeled including the latitude and longitude in decimal degrees. There shall be a sufficient number of monitoring locations to adequately characterize any variations within the drainage from all parts of the mining activity. These monitoring locations **CAN NOT COINCIDE** with any sediment structure discharge point as untreated drainage must be collected for the demonstration. At least six (6) months of data to characterize the flow, pH and the Total Recoverable Iron concentration of the influent or untreated effluent shall be collected and submitted as part of this demonstration.

The effect of reclassifying the mine from "acid or ferruginous" to "alkaline" is to remove the effluent limitations and monitoring requirements for total recoverable manganese which constitutes a major modification and necessitates the reopening of the KPDES permit. As this is a general permit there are a number of administrative and logistical issues that preclude the reopening of the general permit to allow for this reclassification. Therefore if the permittee elects to continue the process for reclassification to an alkaline mine then the permittee shall seek an individual permit. To obtain an individual KPDES permit with an alkaline mine classification the permittee shall submit completed Form 1, completed Form C and a copy of the demonstration to KDOW.

Alternate Effluent Limitations - pH

Pursuant to 401 KAR 5:065, Sections 4 and 5 (40 CFR Part 434.62), the permit issuing authority may allow the pH level in the final effluent to exceed 9.0 standard units to a small extent in order that the Manganese limitations may be achieved when the application of neutralization and sedimentation treatment technology results in the inability to comply. This alternate pH limitation shall be granted upon request for a specific discharge, provided the operator submits sufficient documentation, with the Discharge Monitoring Report (DMR), that an effluent pH of greater than 9.0 standard units was required to achieve the Manganese limitation. However, under no circumstances shall the pH exceed 10.0 standard units.

This documentation shall include sample results utilized to determine that additional pH adjustment to between 9.0 and 10.0 standard units was required. This data shall include flows, pH, and total recoverable manganese concentrations. In the event the Cabinet determines this condition to be chronic the permittee shall submit plans for a permanent a solution.

B. OTHER REQUIREMENTS - continued

Alternate Effluent Limitations - Precipitation

Pursuant to the requirements of 401 KAR 5:065, Section 4(2) (40 CFR Part 434.63), precipitation induced discharges are eligible for alternate effluent limits. The applicable alternate limits are a function of the size of the precipitation event and the type of operation and shall be granted on an event by event basis, provided the operator requests alternate precipitation limitations and provides sufficient proof that the discharge or increase in the discharge was caused by the applicable precipitation event described. This could be in the form of precipitation data, weir flow measurements, dated photographs, or equivalent proof of record. This information shall be submitted with the Discharge Monitoring Report (DMR). The following alternate limitations are available:

(a)(1) The alternate limitations specified in paragraph (a)(2) of this section apply with respect to:

(i) All discharges of alkaline mine drainage except discharges from underground workings of underground mines that are not commingled with other discharges eligible for these alternate limitations;

(ii) All discharges from steep slope areas, (as defined in section 515(d)(4) of the Surface Mining Control and Reclamation Act of 1977, as amended (SMCRA)), and from mountaintop removal operations (conducted pursuant to section 515(c) of SMCRA);

(iii) Discharges from coal preparation plants and preparation plant associated areas (excluding acid or ferruginous mine drainage from coal refuse disposal piles).

(2) Any discharge or increase in the volume of a discharge caused by precipitation within any 24 hour period less than or equal to the 10-year, 24-hour precipitation event (or snowmelt of equivalent volume) may comply with the following limitations instead of the otherwise applicable limitations

EFFLUENT LIMITATIONS DURING PRECIPITATION	
POLLUTANT OR POLLUTANT PROPERTY	**EFFLUENT LIMITATIONS**
Settleable Solids	0.5 ml/l maximum not to be exceeded
pH	6.0 to 9.0 at all times

(b) The following alternate limitations apply with respect to acid or ferruginous drainage from coal refuse disposal piles:

Any discharge or increase in the volume of a discharge caused by precipitation within any 24 hour period greater than the 1-year, 24-hour precipitation event, but less than or equal to the 10-year, 24-hour precipitation event (or snowmelt of equivalent volume) may comply with the following limitations instead of the otherwise applicable limitations:

EFFLUENT LIMITATIONS DURING PRECIPITATION	
POLLUTANT OR POLLUTANT PROPERTY	**EFFLUENT LIMITATIONS**
Settleable Solids	0.5 ml/l maximum not to be exceeded
pH	6.0 to 9.0 at all times

B. OTHER REQUIREMENTS - continued

Alternate Effluent Limitations – Precipitation – continued

(c) The following alternate limitations apply with respect to acid or ferruginous mine drainage, except for discharges addressed in paragraphs (a) (mountaintop removal and steep slope areas), (d) (controlled surface mine discharges) and (f) (discharges from underground workings of underground mines) of this section:

(1) Any discharge or increase in the volume of a discharge caused by precipitation within any 24 hour period less than or equal to the 2-year, 24-hour precipitation event (or snowmelt of equivalent volume) may comply with the following limitations instead of the otherwise applicable limitations:

EFFLUENT LIMITATIONS DURING PRECIPITATION	
POLLUTANT OR POLLUTANT PROPERTY	**EFFLUENT LIMITATIONS**
Total Recoverable Iron	7.0 mg/l maximum for any 1 day
Settleable Solids	0.5 ml/l maximum not to be exceeded
pH	6.0 to 9.0 at all times

(2) Any discharge or increase in the volume of a discharge caused by precipitation within any 24 hour period greater than the 2-year, 24-hour precipitation event, but less than or equal to the 10-year, 24-hour precipitation event (or snowmelt of equivalent volume) may comply with the following limitations instead of the otherwise applicable limitations:

EFFLUENT LIMITATIONS DURING PRECIPITATION	
POLLUTANT OR POLLUTANT PROPERTY	**EFFLUENT LIMITATIONS**
Settleable Solids	0.5 ml/l maximum not to be exceeded
pH	6.0 to 9.0 at all times

(d)(1) The alternate limitations specified in paragraph (d)(2) of this section apply with respect to all discharges described in paragraphs (a), (b) and (c) of this section and to:

(i) Discharges of acid or ferruginous mine drainage from underground workings of underground mines which are commingled with other discharges eligible for these alternate limitations; and

(ii) Controlled acid or ferruginous surface mine discharges; and

(iii) Discharges from reclamation areas.

(2) Any discharge or increase in the volume of a discharge caused by precipitation within any 24 hour period greater than the 10-year, 24-hour precipitation event (or snowmelt of equivalent volume) may comply with the following limitations instead of the otherwise applicable limitations:

EFFLUENT LIMITATIONS DURING PRECIPITATION	
POLLUTANT OR POLLUTANT PROPERTY	**EFFLUENT LIMITATIONS**
pH	6.0 to 9.0 at all times

B. OTHER REQUIREMENTS - continued

Alternate Effluent Limitations – Precipitation – continued

(e) The operator shall have the burden of proof that the discharge or increase in the discharge was caused by the applicable precipitation event described in the previous paragraphs. Such proof shall take the form of a daily precipitation log maintained in accordance with the requirements of 401 KAR 5:065, Section 1(10) or local NOAA weather station records or equivalent. For alternate precipitation event limits related to self monitoring this information shall be submitted with the Discharge Monitoring Report at the end of the monthly monitoring period. For compliance samples collected by any representative of the EEC the permittee has 7 calendar days from the date of the mine inspection report to submit proof of a qualifying event has occurred. For all other events the precipitation logs shall be provided upon request to any representative of the EEC.

(f) Discharges of mine drainage from underground workings of underground mines, which are not commingled with discharges eligible for the alternate limitations, shall in no event be eligible for the alternate limitations.

(g) The applicable alternate limits are a function of the size of the precipitation event and the type of operation. These alternate limits shall be granted on an event by event basis, provided the operator requests them and submits sufficient documentation as specified above in paragraph (e) above. Alternate limits are not available for the parameters of Flow, Oil & Grease, Acidity, and Alkalinity.

The table on the following page summarizes these alternate precipitation effluent limitations.

Authorization to Discharge

For existing operations which were granted authorization by previous versions of this general permit authorization to discharge is extended upon the effective date of this general permit. For new or expanded operations authorization to discharge under the terms of this general permit shall be effective upon the issuance of written notification by the KYDOW and upon the issuance of a fully effective permanent program permit by DNR.

Benthic Macroinvertebrate Assessment

Within the term of this permit each existing mining operation authorized by this general permit shall conduct and submit to KDOW a one-time benthic macroinvertebrate assessment immediately downstream of an outfall in each watershed impacted by the mining operation. New or expanded mining operations shall have one year from the date of issuance of the notification of coverage to submit the benthic macroinvertebrate study. The assessments shall be performed in accordance with the guidance provided in KDOW Document DOWSOP03003 – Methods for Sampling Benthic Macroinvertebrate Communities in Wadeable Waters March, 2009 and during the appropriate reference period. In the case where two or more mining operations are active within the same watershed the permit or permittees may perform a joint assessment. In the case where an assessment had been performed within the last 12 months the permittee may utilize that information to comply with this requirement. Failure to conduct and submit the assessments within the term of the permit will result in the termination of coverage.

B. OTHER REQUIREMENTS – continued

TABLE 1 - ALTERNATE PRECIPITATION EVENT EFFLUENT REQUIREMENTS

TYPE OF DISCHARGE	PRECIPITATION EVENT			
	Discharge Caused by Precipitation	1-yr, 24-hr Event	2-yr, 24-hr Event	10-yr, 24-hr Event
Discharges from underground workings of underground mines not commingled including alkaline mines	**NO ALTERNATE LIMITATIONS**	**NO ALTERNATE LIMITATIONS**	**NO ALTERNATE LIMITATIONS**	**NO ALTERNATE LIMITATIONS**
Discharges of dredge return water	**NO ALTERNATE LIMITATIONS**	**NO ALTERNATE LIMITATIONS**	**NO ALTERNATE LIMITATIONS**	**NO ALTERNATE LIMITATIONS**
Discharges from underground workings of underground mines commingled	**NO ALTERNATE LIMITATIONS**	**NO ALTERNATE LIMITATIONS**	**NO ALTERNATE LIMITATIONS**	pH
Controlled surface mine drainage (except steep slope and mountaintop removal)	**NO ALTERNATE LIMITATIONS**	**NO ALTERNATE LIMITATIONS**	**NO ALTERNATE LIMITATIONS**	pH
Non-controlled surface mine drainage (except steep slope and mountaintop removal)	SS, pH, Fe	SS, pH, Fe	SS, pH	pH
Discharges from coal refuse disposal piles	**NO ALTERNATE LIMITATIONS**	SS, pH	SS, pH	pH
Discharges from steep slope and mountaintop removal areas	SS, pH	SS, pH	SS, pH	pH
Discharges from preparation plant associated areas (excluding coal refuse disposal piles)	SS, pH	SS, pH	SS, pH	pH
Alkaline Mine Drainage	SS, pH	SS, pH	SS, pH	pH
Reclamation Areas	SS, pH	SS, pH	SS, pH	pH
The abbreviations Fe and SS mean Total Recoverable Iron and Settleable Solids, respectively.				
The applicable alternate limits are a function of the size of the precipitation event and the type of operation and shall be granted on an event by event basis, provided the operator requests alternate precipitation limitations and provides sufficient proof that the discharge or increase in the discharge was caused by the applicable precipitation event described.				
These alternate limits do not affect the parameters of Flow, Oil & Grease, Acidity, and Alkalinity.				

B. OTHER REQUIREMENTS - continued

Commingling of Wastestreams

Where wastestreams from any facility covered by this permit are combined for treatment or discharge with wastestreams from another facility, the concentration of each pollutant in the combined discharge may not exceed the most stringent limitations for that pollutant applicable to any component wastestream of the discharge.

Department of the Army, Corps of Engineers Condition

The following special condition is applicable to certain coal mining operations, which affect anchorage and navigation of any waters of the United States, which are under the jurisdiction of the Corps of Engineers. The applicability of this condition to specific dischargers will be included in the written notice from the DOW that authorizes discharge under this permit.

The permittee shall undertake erosion control practices which utilize proper sedimentation control measures in order to minimize resultant sedimentation in navigable waters which occur as a result of discharges from both point and non-point sources connected with the overall operations. The practices will apply to existing and future facilities and activities, and will, at a minimum, provide for the control of erosion and runoff from access and haul roads, coal handling structures, utility right-of-way easements, and excavations. The permittee will also provide adequate ditching, culverts, sediment traps and ponds, and other structures or procedures necessary to minimize sedimentation in navigable waters. The DOW shall have the right to inspect the sediment control measures being undertaken by the permittee and, in consultation with the U.S. Army Corps of Engineers, direct any additional measures which are necessary to comply with the requirements of this condition. Should this discharge result in sufficient deposition of solids material to create a hazard to anchorage or navigation on any navigable water, such deposits will be removed by the permittee without expense to the United States Government. Further, the time and manner of such removal, as well as the location and manner of its disposal, must receive the prior written approval by the District Engineer of the Corps of Engineers.

Information Requirements Existing Coal Mines

Within the term of this permit each existing mining operation authorized by this general permit shall conduct and submit to KDOW a one-time analysis for each of the following parameters, Total Recoverable (Antimony, Arsenic, Beryllium, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, Selenium, Silver, Thallium and Zinc), Free Cyanide, Total Phenols, and Hardness (as mg/l $CaCO_3$), from a representative outfall in each effected watershed.

In-stream Treatment or Disposal Facilities

This permit does not authorize the construction or use of in-stream treatment or disposal facilities (sediment ponds, hollow fills, valley fills, slurry ponds, etc.) Such authorization is within the jurisdiction of the Corps of Engineers (COE) and is implemented through the Section 404 permitting program of the Clean Water Act. Since the COE is a federal agency, this permitting action requires the issuance of a Section 401 Water Quality Certification by the Division of Mine Permits. The requirements of the 401 Water Quality Certification issued for this operation are hereby incorporated by reference into the KPDES permit as enforceable requirements.

C. SCHEDULE OF COMPLIANCE

The permittees shall attain compliance with all requirements of this permit on the effective date of this permit unless otherwise stated.

Existing facilities which received coverage prior to the expiration of this permit on December 31, 2008 shall have one year from the effective date of this general permit to achieve compliance with the daily maximum limit of 4.0 mg/l for total recoverable iron.

See Part IV for implementation and submission requirements related to the Best Management Practices (BMP) Plan.

D. MONITORING AND REPORTING

Samples and measurements taken in accordance with the requirements of PART I pages I-1 through I-8 shall be representative of the volume and nature of the monitored discharge and shall be taken at the following location: at nearest accessible point after final treatment, but prior to actual discharge to or mixing with the receiving waters. For sediment control structures the spillway/discharge pipe of the structure shall be designated as the compliance point unless the permittee has constructed and bonded a discharge channel from the sediment control structure to the receiving water. For discharge channels the compliance point shall be that point along the discharge channel that the permittee and the Cabinet have agreed upon. **SAMPLES ARE NOT TO BE TAKEN FROM THE SEDIMENT STRUCTURE WHEN THERE IS NO DISCHARGE.**

All monitoring points (outfalls) authorized by this permit shall receive a unique identifier consistent with the naming convention utilized by EPA's Permit Compliance System. PCS requires the assignment of a three character name, i.e. 001, 002 thru 999, for each outfall designated on an individual permit or general permit coverage. This outfall name is to be included on all Discharge Monitoring Reports (DMRs) and any other reports submitted by the permittee. The permittee shall be responsible for establishing the name for each outfall prior to its activation and maintaining an accurate record of the outfall name, receiving stream and latitude/longitude. The permittee shall provide upon the request of KDOW or the Department for Natural Resources (DNR) a list of outfalls for each currently held permit, both individual and general.

Discharge monitoring results obtained during the previous month shall be summarized for each outfall and reported using only KDOW approved Discharge Monitoring Report (DMR) forms and formats. DMRs for each calendar quarter shall be postmarked no later than the 28th day of the month and submitted to the appropriate Department for Natural Resources Regional Office for your operation.

E. DEFINITIONS

The terms **"1-year, 2-year, and 10-year, 24-hour precipitation events"** mean the maximum 24-hour precipitation event with a probable recurrence interval of once in one (1), two (2), and ten (10) years, respectively, as defined by the National Weather Service and Technical Paper No. 40, "Rainfall Frequency Atlas of the U.S.," May 1961, or equivalent regional or rainfall probability information developed there from.

The term **"abandoned mine"** means a mine where mining operations have occurred in the past and (1) the applicable reclamation bond or financial assurance has been released or forfeited, or (2) if no reclamation bond or other financial assurance has been posted, no mining operations have occurred for five (5) years or more.

The term **"acid or ferruginous mine drainage"** means mine drainage which, before any treatment, has a pH of less than 6.0 or has a total recoverable iron concentration equal to or greater than 10.0 mg/l.

The term **"active mining area"** means the area, on and beneath land, used or disturbed in activity related to the extraction, removal, or recovery of coal from its natural deposits. This term excludes coal preparation plants, coal preparation plant associated areas, and post-mining areas.

The term **"alkaline mine drainage"** means mine drainage, which before any treatment, has a pH equal to or greater than 6.0 and Total Recoverable Iron Concentration of less than 10.0 mg/l.

The term **“calendar day”** means, for the purpose of this permit, any 24-hour period.

The term **"coal preparation plant"** means a facility where coal is subjected to cleaning, concentrating, or other processing or preparation in order to separate coal from its impurities and then is loaded for transit to a consuming facility.

The term **"coal preparation plant associated areas"** means the coal preparation plant yards, immediate access roads, coal refuse piles, and coal storage piles and facilities.

The term **"coal preparation plant water circuit"** means all pipes, channels, basins, tanks, and all other structures and equipment that convey, contain, treat, or process any water that is used in coal preparation processes within a coal preparation plant.

The term **"coal refuse disposal pile"** means any coal refuse deposited on the earth and intended as permanent disposal or long-term storage (greater than 180 days) of such material, but does not include coal refuse deposited within the active mining area or coal refuse never removed from the active mining area.

The term “**coal remining operation”** means a coal mining operation at a site on which coal mining was previously conducted and where the site has been abandoned or the performance bond has been forfeited.

The term **"controlled surface mine drainage"** means any surface mine drainage that is pumped or siphoned from the active mining area.

The term **“daily maximum concentration”** means the daily determination of concentration as an instantaneous maximum that cannot be exceeded by any sample.

The term **“daily precipitation log”** means a daily record of precipitation levels maintained by the permittee to provide proof that a qualifying event has occurred within the preceding 24 hours. This may take the form of daily readings of local rain gages, National Oceanic and Atmospheric Administration data, etc.

E. DEFINITIONS - continued

The term **“existing source coal mine”** means a coal mine, which the KYDOW determines is neither a “new source coal mine” nor a “new discharger coal mine.”

The term **“expanded operation”** means any amendment or revision of a mining plan, which meets conditions 2, 3, or 5 of the term “major alteration”.

The term **"final bond release"** means the time at which the Department for Surface Mining Reclamation and Enforcement returns any remaining reclamation or performance bond based upon its determination that reclamation work (including, in the case of underground mines, mine sealing, and abandonment procedures) and revegetation requirements have been satisfactorily completed.

The term **“grab sample”** means a single influent or effluent portion collected in less than fifteen (15) minutes at the period most representative of the total discharge.

The term **“instantaneous maximum”** means the maximum value not to be exceeded at any time.

The term **“major alteration”** means a coal mine for which the KYDOW determines that a new, altered, or increased discharge of pollutants has occurred after May 29, 1981, in connection with the mine for which the KPDES permit is being considered. In making this determination, the KYDOW shall take into account one (1) or more of the following events: 1) Extraction of a coal seam not previously extracted by that mine; 2) Discharge into a drainage area not previously affected by wastewater discharges from the mine; 3) Extensive new surface disturbance at the mining operation; 4) Construction of a new shaft, slope, or drift; and 5) Such other factors as the Director of the KYDOW deems relevant.

The term **"mine drainage"** means any drainage and any water pumped or siphoned from an active mining area or a post-mining area.

The abbreviation **"ml/l"** means milliliters per liter.

The term **“monthly average concentration”** means the arithmetic average of all sample concentrations collected during a calendar month.

The term **“new discharger coal mine”** means a coal mine: 1) from which there is or may be a new or additional discharge of pollutants at a site at which on August 13, 1979, it had never discharged pollutants; and 2) which has never received a finally effective KPDES or NPDES permit for discharge at that site; and 3) which is not a new source.

The term **"new source coal mine"** means a coal mine (excluding coal preparation plants and coal preparation plant associated areas), including an abandoned mine, which is being re-mined, on which construction is commenced after May 4, 1984; or which is determined by the Director of the KYDOW to constitute a "major alteration."

The term **“phase I reclamation bond release”** means release by the Department for Surface Mining Reclamation and Enforcement of a portion of the performance bond after the following work has been completed: backfilling, re-grading, top soil replacement, drainage control work, including soil preparation, re-grading, seeding, planting, and mulching in accordance with the approved reclamation plan.

The term **“point source”** means any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, culvert, tunnel, conduit, well, discrete fissure, container, wet seals, mine adits, seeps, or sumps, from which pollutants are or may be discharged.

E. DEFINITIONS - continued

The term **"post-mining area"** means: 1) A reclamation area; or 2) The underground workings of an underground coal mine after the extraction, removal, or recovery of coal from its natural deposit has ceased and prior to bond release.

The term **"reclamation area"** means the surface area of a coal mine, which has been returned to required contour and on which revegetation (specifically, seeding or planting) work has commenced.
The term **"settleable solids"** is that matter measured by the volumetric method specified in PART I, F of the permit.

The terms **"treatment facility"** and **"treatment system"** mean all structures, which contain, convey, and as necessary, chemically or physically treat coal mine drainage, coal preparation plant process wastewater, or drainage from coal preparation plant associated areas, which remove pollutants regulated by this part from such waters. This includes all pipes, channels, ponds, basins, tanks, and all other equipment serving such structures.

The term **"underground workings of an underground mine"** means the underground workings including shafts, adits, support facilities, etc. of an underground mine, but excludes surface disturbances associated with the underground mine.

F. TEST PROCEDURES

Test procedures for the analysis of pollutants shall conform to all regulations published pursuant to KRS 224 (401 KAR 5:065, Section 1(10)).

Settleable Solids

Test procedures for the determination of settleable solids, as described in c., shall conform to 40 CFR 434.64 as adopted by 401 KAR 5:065, Section 4(2).

Fill an Imhoff cone to the one (1) liter mark with a thoroughly mixed sample. Allow to settle undisturbed for 45 minutes. Gently stir along the inside surface of the cone with a stirring rod. Allow to settle undisturbed for 15 minutes longer. Record the volume of settled material in the cone as milliliters per liter. Where a separation of settleable and floating materials occurs do not include the floating material.

PART II - STANDARD CONDITIONS FOR KPDES PERMIT

This permit has been issued under the provisions of KRS Chapter 224 and regulations promulgated pursuant thereto. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits or licenses required by this Cabinet and other state, federal, and local agencies.

It is the responsibility of the permittee to demonstrate compliance with permit parameter limitations by utilization of sufficiently sensitive analytical methods.

The permittee is also advised that all KPDES permit conditions in KPDES Regulation 401 KAR 5:065, Section 1 will apply to all discharges authorized by this permit.

PART III - ADDITIONAL REQUIREMENTS

A NOTICE OF INTENT (NOI) CONTENTS

An NOI-CM and attachments shall be submitted by all operators seeking new or expanded coverage under this general permit. The NOI-CM requires the following information:

Section I – Permittee Information

Applicant Name, Mailing Address, City, State, Zip Code, Contact Name, Contact Telephone Number and E-mail Address

Section II – General Site Information

DNR Number, Amendment/Revision Number, Type of Operation, County, Nearest Community, Nearest Public Road Intersection, Nearest Named Stream, Latitude/Longitude, Surface Acreage (Original/Added), Underground Acreage (Original Added), a full color topographic map with the general facility location clearly marked and a copy of the Mining and Reclamation Plan Map and the Environmental Resources Map.

Section III – Site Specific Information

Number of sediment structures proposed, Number of fills proposed, Number of stream crossings proposed, Name of nearest downstream public water supply intake, Distance in stream miles to nearest downstream public water supply intake, and the sediment control structure, fill, and stream crossing inventories on pages 3 and 4 of the NOI-CM.

Section IV – COE CWA Section 404 Permit Information

Has a 404 permit been obtained, permit number, issuance date and activities covered.

Section V – Other Environmental Approvals and Permit Information

Provide permit numbers or application dates for following permits or approvals if required: 401 Water Quality Certification, Drinking Water, Wastewater Construction, Water Withdrawal, Air Emissions, Solid or Special Wastes, and Hazardous Waste Registration.

Section VI – Effluent Characteristics

Collect, analyze and report at least one sample of effluent from an outfall in each watershed for the following parameters: Total Suspended Solids, Flow, pH, Hardness (as mg/l $CaCO_3$), Sulfate (as SO_4), Conductivity ($\mu S/cm$), Total Recoverable (Aluminum, Iron, Manganese, Antimony, Arsenic, Beryllium, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, Selenium, Silver, Thallium and Zinc), Free Cyanide and Total Phenols. Include the outfall number, latitude/longitude, date collected, receiving water, sample type, analytical method used and method detection level.

If the NOI is for a new activity which does not have any existing discharge points then the applicant may use data collected form a similar existing activity within the watershed. If none exist the applicant shall within two years of issuance of the general permit coverage letter provide the required analytical data to KDOW.

The background water quality data collected as, part of the SMCRA permit application process is not acceptable for this requirement. All samples and analysis are to be taken and performed in accordance with the requirements of 40 CFR Part 136 and recorded on an Effluent Characteristics Data Sheet. An Effluent Characteristics Data Sheet shall be prepared for each sample collected.

Section VII – Best Management Practices (BMP) Plan

Indicate whether a generic Coal BMP Plan or site specific BMP shall be completed and implemented, or the Oil & Grease requirements will be followed.

Section VIII – Certification

Name, Official Title, Telephone Number and Signature of person certifying the information provide is true and accurate, and the date signed.

Section IX – NOI Preparer Information

Preparer Name, Mailing Address, City, State, Zip Code, Phone Number and E-mail Address

The Notice of Intent (NOI) shall be submitted to the Division of Water electronically using a CD or e-mail as an Adobe Acrobat PDF file. Submission of the NOI shall be at the same time as the application for a Surface Disturbance Permit is filed with the Department for Natural Resources. Should changes in the proposed activity occur then a revised NOI will be required.

The afore-described procedure shall also apply to those operations that meet the definition of an expanded operation, see definition on page I-14 of this permit.

Attachments

USGS topographic map
Mining and Reclamation Map
A completed Form HQAA

Termination Requirements

Termination of general permit coverage shall take the form of a Notice of Termination (NOT), which will consist of the following elements:

a. A completed KPDES FORM NOT-CM.

b. Copies of DNR release.

NOTs are to be filed only after the entire permitted area has received final bond release.

Transfers

KYDOW receives transfer information from KYDNR by way of the KYDNR's Staffware program. KYDOW shall issue a transfer of the general permit based on the information obtained from this system.

FORMS

The KPDES FORM NOI-CM and NOT-CM forms are available from the KYDOW's web site at:

http://www.water.ky.gov/homepage_repository/kpdes_permit_aps.htm

B Operations Automatically Excluded From General Permit Coverage

1) Those coal mining operations which have not been permitted under KRS Chapter 350 and KAR Title 405.

2) New or expanded operations proposing to discharge directly into a water body that has been classified as a Cold Water Aquatic Habitat (CAH) or as an Outstanding State Resource Water (OSRW) as listed in 401 KAR 10:026, Section 5.

3) New or expanded operations proposing to discharge directly into or to a direct first or second order tributary of a publicly-owned lake or reservoir as listed in 401 KAR 10:026, Section 5.

4) New or expanded operations proposing to discharge directly into a water body that has been categorized as an Outstanding National Resource Water (ONRW) or as an Exceptional Water (EW) as listed in 401 KAR 10:030.

5) New or expanded operations involving the dredging of coal from waters of the Commonwealth.

6) New or expanded operations involving the wet beneficiation (washing) of coal.

7) New or expanded operations involving the disposal of coal slurry into waters of the Commonwealth or underground injection.

8) Any operation using or proposing to use Anhydrous Ammonia as a treatment option.

9) New or expanded operations within five (5) miles upstream of an existing drinking water intake.

10) Any operation discharging directly to a water of the Commonwealth that has been listed, in the most recently developed 305 (b) report or 303(d) list, as impaired for one or more of the pollutants commonly associated with coal mining. Pollutants commonly associated with coal mining include sedimentation, total suspended solids, total dissolved solids, conductivity, iron, manganese, and metals.

11) Any operation that meets the definition of a coal remining operation found in Coal Mining Effluent Guidelines (Subpart G of 40 CFR Part 434).

12) Any operation proposing to dispose of solid or special wastes within the mining area.

13) Any operation that is classified as an “Alkaline Mine” pursuant to 40 CFR 434.11.

14) Any operation, which the Division of Water (KYDOW) determines that an individual permit would better address the discharges from that operation.

Any interested person may petition the Division of Water to require an individual permit under these conditions.

PART IV - BEST MANAGEMENT PRACTICES

SECTION A. GENERAL CONDITIONS

1. Applicability

These conditions apply to all permittees who use, manufacture, store, handle, or discharge any pollutant listed as: (1) toxic under Section 307(a)(1) of the Clean Water Act; (2) oil, as defined in Section 311(a)(1) of the Act; (3) any pollutant listed as hazardous under Section 311 of the Act; or (4) is defined as a pollutant pursuant to KRS 224.01-010(35) and who have ancillary manufacturing operations which could result in (1) the release of a hazardous substance, pollutant, or contaminant, or (2) an environmental emergency, as defined in KRS 224.01-400, as amended, or any regulation promulgated pursuant thereto (hereinafter, the "BMP pollutants"). These operations include material storage areas; plant site runoff; in-plant transfer, process and material handling areas; loading and unloading operations, and sludge and waste disposal areas.

2. BMP Plan

The permittee shall develop and implement a Best Management Practices (BMP) plan consistent with 401 KAR 5:065, Section 2(10) pursuant to KRS 224.70-110, which prevents or minimizes the potential for the release of "BMP pollutants" from ancillary activities through plant site runoff; spillage or leaks, sludge or waste disposal; or drainage from raw material storage. A Best Management Practices (BMP) plan will be prepared by the permittee unless the permittee can demonstrate through the submission of a BMP outline that the elements and intent of the BMP have been fulfilled through the use of existing plans such as the Spill Prevention Control and Countermeasure (SPCC) plans, contingency plans, and other applicable documents.

3. Implementation

If this is the first time for the BMP requirement, then the plan shall be developed within 90 days of the effective date of the permit. Implementation shall be within 180 days of that submission. For permit renewals the plan in effect at the time of permit reissuance shall remain in effect. Modifications to the plan as a result of ineffectiveness or plan changes to the facility shall be submitted to the Division of Water and implemented as soon as possible.

4. General Requirements

The BMP plan shall:

a. Be documented in narrative form, and shall include any necessary plot plans, drawings, or maps.

b. Establish specific objectives for the control of toxic and hazardous pollutants.

(1) Each facility component or system shall be examined for its potential for causing a release of "BMP pollutants" due to equipment failure, improper operation, natural phenomena such as rain or snowfall, etc.

(2) Where experience indicates a reasonable potential for equipment failure (e.g., a tank overflow or leakage), natural condition (e.g., precipitation), or other circumstances which could result in a release of "BMP pollutants," the plan should include a prediction of the direction, rate of flow, and total quantity of the pollutants which could be released from the facility as result of each condition or circumstance.

c. Establish specific Best Management Practices to meet the objectives identified under paragraph b of this section, addressing each component or system capable of causing a release of "BMP pollutants."

d. Include any special conditions established in part b of this section.

e. Be reviewed by plant engineering staff and the plant manager.

5. Specific Requirements

The plan shall be consistent with the general guidance contained in the publication entitled "NPDES Best Management Practices Guidance Document," and shall include the following baseline BMPs as a minimum.

a. BMP Committee
b. Reporting of BMP Incidents
c. Risk Identification and Assessment
d. Employee Training
e. Inspections and Records
f. Preventive Maintenance
g. Good Housekeeping
h. Materials Compatibility
i. Security
j. Materials Inventory

6. SPCC Plans

The BMP plan may reflect requirements for Spill Prevention Control and Countermeasure (SPCC) plans under Section 311 of the Act and 40 CFR Part 151, and may incorporate any part of such plans into the BMP plan by reference.

7. Hazardous Waste Management

The permittee shall assure the proper management of solid and hazardous waste in accordance with the regulations promulgated under the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1978 (RCRA) (40 U.S.C. 6901 et seq.) Management practices required under RCRA regulations shall be referenced in the BMP plan.

8. Documentation

The permittee shall maintain a description of the BMP plan at the facility and shall make the plan available upon request to EEC personnel. Initial copies and modifications thereof shall be sent to the following addresses when required by Section 3:

Division of Water
Surface Water Permits Branch
Permit Support Section
200 Fair Oaks Lane
Frankfort, Kentucky 40601

9. BMP Plan Modification

The permittee shall amend the BMP plan whenever there is a change in the facility or change in the operation of the facility which materially increases the potential for the ancillary activities to result in the release of "BMP pollutants."

10. Modification for Ineffectiveness

If the BMP plan proves to be ineffective in achieving the general objective of preventing the release of "BMP pollutants," then the specific objectives and requirements under paragraphs b and c of Section 4, the permit, and/or the BMP plan shall be subject to modification to incorporate revised BMP requirements. If at any time following the issuance of this permit the BMP plan is found to be inadequate pursuant to a state or federal site inspection or plan review, the plan shall be modified to incorporate such changes necessary to resolve the concerns.

SECTION B. SPECIFIC CONDITIONS

The following items shall be incorporated into the BMP plan:

Best Management Practices to control contaminated runoff from haul roads, exploration sites, access roads, etc. Implementation of such practices in lieu of monitoring and complying with effluent limits for these point sources must be approved by the KDOW`.

Best Management Practices to control contaminated runoff from the handling, storage and disposal of petroleum products and the maintenance procedures for mining equipment.

The Groundwater Protection Plan as required by 401 KAR 5:037

The conditions of any 401 Water Quality Certification granted to the operation.